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INTRODUCTION

The editors apologize for the fact that the eleventh main issue is several months overdue. The reason for this is twofold: 1) unforeseen alterations have occurred in the administrative personnel of the Hubrecht Laboratory; 2) the preparation of the new Subject Index has brought a considerable amount of extra work.

The main change that has been made in the set-up of the periodical is in the Subject Index. So far the arrangement of the Index was systematical, which entailed the use of twelve different "keys" for the location of research subjects. It was felt that this made the use of the Index unnecessarily cumbersome. Moreover, it was sometimes difficult to fit work carried out with modern methods into the system in such a way that it could be easily retrieved. Therefore, it was decided to replace the systematical Index by an *alphabetical* Index. Great pains have been taken to make the new Index as efficient as possible. For more details the reader is referred to page 277. Suggestions for improvement are solicited.

As far as the Directory of Institutes is concerned, addresses of Institutes are now omitted. This makes for better surveyability; the full address of an Institute can always be found in the Directory of Names and Addresses. Furthermore, names of Institute members who are not explicitly engaged in developmental biology are as a rule not listed.

New contacts were established with Algeria, Ceylon, Hawaii (U.S.A.), Jamaica, and Nigeria. The contacts with Argentine, India, and Mexico were extended. Moreover, several European countries, particularly France and Western Germany, show a marked increase in the number of Institutes listed.

The steadily increasing costs of printing have rendered a rise of the subscription unavoidable. Unfortunately, it was impossible to notify our subscribers earlier. *Starting with the present main issue the subscription for two years has been fixed at $ 10.—*. Moreover, the costs of shipment will henceforth be charged separately. At present these amount to $ 0.50 for two years.

Information concerning the Hubrecht Laboratory may be found on page 329. For information concerning the „Institut International d'Embryologie", please see page 331.

P. D. NIEUWKOOP

J. FABER

DIRECTORY OF NAMES AND ADDRESSES

with Subjects of Research

(alphabetical order)

ABBOTT, Miss U. Ph.D., M.I.I.E., Prof. — Dept. of Poultry Husbandry, Agric. Exper. Station, Coll. of Agric., Univ. of California, DAVIS, Calif. 95616, U.S.A.

ABELOOS, M. Prof. — Lab. de Biol. génér. de la Fac. des Sci., Place Victor Hugo, MARSEILLE, France

ABERCROMBIE, M. B.Sc., M.A., F.R.S., M.I.I.E., Prof. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Study of cell relations in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with Mrs. J. E. M. HEAYSMAN (WAKELING))

ABRAMOVICI A. M.Sc. in Med. Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Fat-soluble vitamins and their inhibitors causing abnormal development of the embryo. *Gallus gallus (Aves)*

ÅBRO, A. — Inst. of Anat., Univ. of Bergen, BERGEN, Aarstadvollen, Norway

a. The development (embryonic and postnatal) of the testes with spermatogenic cells. *Erinaceus europaeus, Sorex araneus (Insectivora)*

ABU-HANIFI, M. S. K. B.Sc. — Dept. of Zool., Government Coll., LAHORE, Pakistan

ABU-SINNA, G. M. E. B.Sc. — Dept. of Zool., Fac. of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt

a. The cultivation of some embryonic organs in vitro. *Bufo regularis (Anura)*

ACHTELIK, W. Mgr.biol. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland

ACKERMAN, G. A. M.D., Ph.D., Prof. — Dept. of Anat., The Ohio State Univ., 1645 Neil Ave., COLUMBUS, Ohio 43210, U.S.A.

a. Morphology and histochemistry of the hemopoietic system in embryonic and adult condition. *Homo sapiens* and other spp. *(Mammalia)*

ACTON, A. B. M.A., D.Phil. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a. Electron microscope study of spermatogenesis in the SD mutant (with meiotic drive). *Drosophila melanogaster (Diptera)*

ADACHI, H. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimotocho, Sumiyoshi-ku, OSAKA, Japan

a. Studies on the species-specific antigenicities of the cell membrane. *Mus musculus (Rodentia)*

ADAMS, C. E. B.Sc., Ph.D. — Animal Research Station, A.R.C. Unit of Reproductive Physiol. and Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England
  a. Development of ova (preimplantation stages) with special reference to the maternal environment, using the egg transfer technique. *Oryctolagus cuniculus (Lagomorpha)*

ADAMS SMITH, W. N. M.B., Ch.B. — Dept. of Anat., Med. School, Univ. of Otago, DUNEDIN N.2, New Zealand

ADAMSTONE, F. B. Ph.D., Prof. — Dept. of Zool., Univ. of Illinois, URBANA Ill., U.S.A.

ADELMANN, H. B. Dr., M.I.I.E., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.

ADLER, R. M.D. — Inst. de Anat. Gen. y Embriol., Fac. de Med., Paraguay 2155, BUENOS AIRES, Argentina
  a. Experimental neuroembryology. *Gallus domesticus (Aves)*
  b. Neural tube development in organ culture. *Gallus domesticus (Aves)*
  c. Electron microscopy of developing nervous system. *Gallus domesticus (Aves)*

AESCHLIMANN, A. Dr.phil.II — Schweiz. Tropeninst., Socinstr. 57, BASEL, Schweiz
  a. Spermatogenese, Ovogenese, Embryonalentwicklung und Endocrinologie. *(Ixodoidea, Acarina, Arachnoidea)* (in collaboration with R. GEIGY)
  b. Spermatogenese, Ovogenese und Geschlechtsbestimmung. *Planococcus citri (Homoptera)* (in collaboration with R. GEIGY)
  c. Uebertragung von Spirochaetosen über das mütterliche Ovarium auf die Embryonen und damit auf die Nachkommen der nächsten Generation. *(Argasidae, Acarina, Arachnoidea)* (in collaboration with R. GEIGY)
  d. Entwicklung von humanpathogenen Erregern. (in collaboration with R. GEIGY)

AFZELIUS, B. A. Fil.Dr., M.I.I.E. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
  a. Fine Structure of germ cells. *(Invertebrata; Vertebrata)*

AGRELL, I. P. S. Fil.Dr., M.I.I.E., Prof. — Zoophysiol. Inst., Univ. of Lund, LUND, Sweden

ÅKESSON, B. Fil.dr. — Zootom. Dept., Zool. Inst., Univ. of Lund, LUND, Sweden
  a. Descriptive embryology and larval biology. *Eunice kobiensis (Polychaeta)*
  b. Larval morphology and its significance for phylogeny. *Lopadorhynchus* spec. *(Polychaeta)*
  c. Ooplasmic segregation, mitosis and germ line differentiation in early embryos. *Tomopteris helgolandica (Polychaeta)* (in collaboration with Y. MELANDER, Inst. of Genet.)

AKETA, K. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
  a. Biochemistry of fertilization with special reference to carbohydrate and carboxylic acid metabolism. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)*
  b. Protection mechanism against polyspermy. *Oryzias latipes (Teleostei)*

- c. Biochemistry of sperm-egg binding. *Hemicentrotus pulcherrimus (Echinoidea)*

ALAPHILIPPE, F. Lic.ès Sci. — Lab. de Zool. et Biol. anim., Fac. des Sci., POITIERS, Vienne, France

ALBANESE, Mrs. M. P. — Ist. di Zool. e di Anat. Comp., Univ. di Messina, MESSINA, Italia

- a. Ricerche citometriche sugli ovociti in accrescimento. *Arbacia lixula (Echinoidea)*
- b. Ricerche sulla struttura, sull'ultrastruttura e sul citochimismo dei globuli vitellini degli ovociti. *Planorbis corneus (Pulmonata, Gastropoda)* (in collaborazione con A. BOLOGNARI)

ALBERT, J. Dr. en Biol.anim. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, TALENCE (Gironde), France

- a. Morphogenèse de l'appareil digestif. *(Anura)*
- b. Développement des glandes digestives. *(Anura)*
- c. Ultrastructure des cellules du tube digestif chez l'embryon et la larve. *(Anura)*

ALBRIGHT, J. Ph.D. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.

- a. Immunochemical studies of appearance of lens antigens during lens regeneration. *Triturus viridescens (Urodela)* (in collaboration with C. TAKATA and T. YAMADA)
- b. Ontogeny of the immune system. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with T. MAKINODAN)
- c. Differentiation of erythrocytic system during ontogeny. *Gallus gallus (Aves), Mus musculus (Rodentia)*

ALDEN, R. H. Ph.D., Prof. — Dept. of Anat., Med. Units, Fac. of Basic Med. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

ALESCIO, T. M.D. — Ist. di Anat. topogr., Univ. di Napoli, Via L. Armanni 5, NAPOLI, Italia

- a. Development in vitro of embryonic organs. *Mus musculus (Rodentia)*
- b. Effect of ionizing radiation on embryonic organs developing in vitro. *(Mammalia)*

ALEXANDER, G. D.Agr.Sc. — Div. of Anim. Physiol., C.S.I.R.O., Ian Clunies Ross Anim. Res. Lab., Great Western Highway, (P.O.Box 144, Parramatta), PROSPECT, N.S.W., Australia

- a. Investigations of the physical and physiological relations between maternal and embryonic tissues. *Ovis* spec. *(Artiodactyla)*

ALEXANDRE, J.-H. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

- a. Développement du rein. *Homo sapiens (Primates)*

ALLÉAUME (BORDES), Mrs. N. Dr.Biol.anim. — Lab. de Zool. expér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France

- a. Recherches expérimentales sur la détermination des caractères larvaires et imaginaux. *Calliphora* spec. *(Diptera)*

ALLEN, Miss M. J. A.B., M.Sc., A.M., Ph.D., Prof. — Dept. of Biol., Wilson Coll., CHAMBERSBURG, Pa., U.S.A.

- a. A comparative histochemical study of developmental stages. *Autolytus fasciatus (Syllidae, Errantia)* and other spp. *(Polychaeta)*

b. A histochemical and radioautographical study of the stock, differentiating stolons and developmental stages. *Autolytus edwarsi, A. fasciatus (Syllidae, Errantia, Polychaeta)*

ALLEN, R. D. B.A., Ph.D., M.I.I.E. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J.08540, U.S.A.

a. Investigations of the motility of unicellular organisms and of tissue cells in vivo and in vitro. *(Sarcodina, Protista; Metazoa)*

ALLISTON, C. W. B.S., M.S., Ph.D. — Dept. of Zool., North Carolina State Univ., RALEIGH, N.C., U.S.A.

a. In vitro culture temperatures and subsequent viability of ova. *Oryctolagus cuniculus (Lagomorpha)*

ALMEIDA CORRALES, J. M.D. — Dept. de Anat. y Embriol., Fac. de Med., Univ. de Salamanca, SALAMANCA, Spain

a. Experimental morphogenesis of the limb. *Gallus domesticus (Aves)*

ALTMANN, J. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

ALVAREZ, L. Med.Dr. — Inst. F. Olóriz, Fac. of Med., Univ. of Granada, GRANADA, Spain

a. Developmental anatomy of the fetus. *Homo sapiens (Primates)*

AMANO, H. D.Sc., Prof. — Biol. Lab., Doshisha Univ., Kamikyoku, Karasuma Imadegawa, KYOTO ,Japan

a. Developmental mechanism of the heart. *Triturus pyrrhogaster (Urodela)*

b. Developmental mechanism of the limb. *Triturus pyrrhogaster (Urodela)*

AMANUMA, A. Ph.D. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan

a. Hormonal effect on gonadal development.*(Amphibia)*

b. Experimental analysis of gonadal differentiation. *Gallus domesticus (Aves)*

AMER, F.I. B.Sc., M.Sc. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland

AMONS, F. M.Sc. — Anat. Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., the Netherlands

a. Development of pineal gland. *Gallus domesticus (Aves)*

AMOROSO, E.C. F.R.S., M.I.I.E., Prof. — Dept. of Physiol., Royal Veter. Coll. (Univ. of London), Royal College St., LONDON N.W.1 ,England

AMPALATHINKEL, B. — Inst. de Zool. et d'Anat. comp., Univ. de Fribourg, FRIBOURG, Suisse

a. Le développement de la ceinture thoracique. *(Gekkota, Lacertilia)*

AMPRINO, R. M. M.D., M.I.I.E., Prof. — Inst. of human Anat., Fac. of Med., Policlinico, BARI, Italy

a. Relations between ectoderm and mesoderm in the morphogenesis of the wing. *Gallus domesticus (Aves)*

b. Regulative capacities of the wing anlage. *Gallus domesticus (Aves)*

c. Analysis of the twinning of limb buds. *Gallus domesticus (Aves)*

AMY, R. L. M.S., Ph.D., Prof. — Dept. of Biol., Southwestern at Memphis, MEMPHIS 12, Tenn., U.S.A.

a. Relative sensitivity of various developmental stages to ultraviolet light. *Habrobracon juglandis (Microbracon hebetor) (Hymenoptera)*

b. Morphological changes produced in the embryo following exposure to ultraviolet light. *Habrobracon juglandis (=Microbracon hebetor) (Hymenoptera)*
c. Ultraviolet microbeam studies on the developing embryo. *Habrobracon juglandis (=Microbracon hebetor) (Hymenoptera)*

ANDERSON, D. T. B.Sc., Ph.D. — Zool. Building, School of Biol. Scis., Univ. of Sydney, SYDNEY, N.S.W., Australia
a. Embryology and larval development. *Dacus tryoni (Trypetidae, Diptera)*
b. Embryology (segment formation). *Artemia salina (Anostraca), (Conchostraca, Crustacea)*

ANDERSON, J. M. B.S., M.S., Ph.D., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.
a. Visceral regeneration and differentiation. *Asterias forbesi (Asteriidae)*

ANDERSON, J. W. B.A., M.S., Ph.D. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON 6, Wis., U.S.A.
a. Comparative histophysiology of placentas and fetal membranes, especially protein transfer. *Geomys bursarius, Rattus norvegicus (Rodentia), Eptesicus fuscus, Noctilio labialis (Chiroptera), Canis familiaris (Carnivora)*
b. Development of brain proteins.
c. Electron miscroscopy of inductive tissues

ANDERSON, P. N. B.A., M.D. — Sect. on Exper. Embryol., Lab. of Neuroanat. Sci., N.I.N.D.B., Natl.Inst. of Health, BETHESDA, Md. 20014, U.S.A.

ANDO, S. B.Sc., M.A., D.Sc. — Research Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan

ANDRES, G. Dr., M.I.I.E. — Zool. Inst. der Johannes Gutenberg-Univ., Saarstr. 21, MAINZ, Deutsche Bundesrepublik

ANDRES, M. Y. D.V.M., M.Sc., Ph.D. — Dept. of Veter. Anat., Ohio State Univ., 1900 Coffey Rd., COLUMBUS 10, Ohio, U.S.A.
a. Physiology and histochemistry of the developing pineal gland. *(Aves)*
b. Antibody inhibition of pineal development. *Meleagris gallopavo (Aves)*
c. Histochemistry of the developing hypothalamus and pituitary. *Meleagris gallopavo (Aves)*

ANDREW, Miss A. Ph.D. — Dept. of Anat., Med. School, Hospital Street, JOHANNESBURG, Republic of South Africa
a. Origin of enteric ganglia. *Gallus domesticus (Aves)*
b. Histochemical study of histones in the regenerating lens. *Triturus viridescens (Urodela)* (in collaboration with Mrs. V. GABIE)
c. Autoradiographic studies of lens induction (changes in RNA- & protein synthesis during induction). *Xenopus laevis (Anura)* (in collaboration with Mrs. V. GABIE)
d. The origin of enterochromaffin cells (combined culture of endoderm and mesoderm of presomite stages). *Gallus domesticus (Aves)*

ANTEUNIS, Miss A. H. J. D.Sc. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium
a. Substructural investigation of oogenesis and early development. *Artemia salina (Anostraca)*

ANTON, H. J. Dr.phil., Doz. — Zool. Inst. der Univ., Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik

a. Proteinstoffwechsel bei Regenerationsprozessen. *(Amphibia)*
b. Mitotische Aktivität bei Regenerationsvorgängen. *(Amphibia)*

AOTO, T. M.Sc., D.Sc. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
a. Morphological and physiological studies on neurosecretion. *(Crustacea; Pisces; Amphibia)*
b. Sex differentiation and gonadal development. *(Amphibia)*

APEKIN, V. S. — Azov-Black Sea Research Inst. of Marine Fishery Management and Oceanogr., KERCH, Crimean region, U.S.S.R.
a. Immunological study of maturation processes in oocytes, and of early embryogenesis. *Acipenser stellatus, A. güldenstädti colchicus (Chondrostei)*

ARGYRIS (FRANKENHUIS), Mrs. B. F. Ph.D. — Dept. of Zool., Syracuse Univ., 111 Lyman Hall, SYRACUSE, N.Y. 13210, U.S.A.
a. Maturation of immunological capacity; comparative study. *Mus musculus (Rodentia)*

ARGYRIS, Th. S. B.S., Ph.D., Prof. — Dept. of Zool., Syracuse Univ., 111 Lyman Hall, SYRACUSE, N.Y. 13210, U.S.A.
a. Regeneration and the control of growth of adult organs. *(Mammalia)*
  1. Mechanism of hair growth stimulation in wound healing.
  2. Mechanism of cellular proliferation produced by damage in adult liver and kidney.
b. Functional hypertrophy and the control of growth of adult organs. *(Mammalia)*
  1. Mechanism of kidney growth following unilateral nephrectomy.
  2. Role of Plasma proteins in liver growth
c. Stimulation of adult organs and tissues by tumors; growth promoting effects of Ehrlich Ascites tumor, S-180, on skin, mammary gland, liver and kidney. *(Mammalia)*

ARIËNS KAPPERS, J. M.D., M.I.I.E., Prof. — Netherlands Central Inst. for Brain Research, Ydijk 28, AMSTERDAM, the Netherlands
(no embryological work in progress)

ARIMA, Sh. D.Agr. Lab. of Anim. Morphol., Biol. Inst., Fac. of Sci., Nara Women's Univ., Kitauoya-Nishi-machi, NARA, Japan
a. Studies on the end-products of metabolism in the embryo and the tadpole. *Rhacophorus schlegelii* var. *arborea (Anura)*

ARMSTRONG, P. B. B.S., M.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.
a. Function of the developing liver. *Amiurus nebulosus (Teleostei)*
b. Behavioral responses in developing embryos. *Amiurus nebulosus (Teleostei), Ambystoma punctatum (Urodela)*

ARNDT, E. A. Dr.rer.nat., Prof. — Zool. Inst. der Universität, Abt. Meeresbiologie, Universitätsplatz 2, ROSTOCK, D.D.R.
a. Morphologie, Histochemie und Physiologie der Oogenese von Süsswasserformen. *(Teleostei)*

ARNOLD, J. M. B.A., Ph.D. — Dept. of Zool. and Entomol., Coll. of Sci. and Humanities, 360 Science Building, Iowa State Univ., AMES, Iowa 50010, U.S.A.
a. Studies on the egg cortex (histochemical techniques, electron microscopy and centrifugation). *Limnaea stagnalis (Gastropoda), Loligo*

pealii (Decapoda, Mollusca)
b. Studies on the developmental fine structure of the eye-lens. *Limnaea stagnalis (Gastropoda), Loligo pealii (Decapoda, Mollusca)*

ARORA, H.L. Ph.D., M.I.I.E. — Div. of Biol. California Inst. of Technol., PASADENA, Calif., U.S.A.

ASAKURA, K. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan
a. Mechanisms of pharynx formation during regeneration. *Dugesia japonica (Turbellaria)*
b. Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*

ASAMI, K. M.S. — Div. of Biol., Nat. Inst. of Radiol. Scis, Anagawa 4-9, CHIBA, Japan
a. Biochemical research on the hormonal control of placental growth. *Rattus norvegicus (Rodentia)*

ASAYAMA, S. M.Sc., D.Sc., Prof. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
a. The effect of steroid hormones upon sex differentiation; experiments with the method of organ culture. *Mus musculus (Rodentia)*
b. Study on gonad differentiation. *Homo sapiens (Primates)*
c. Experimental analysis of gonadal sex. *Gallus domesticus (Aves)*

ASHHURST, Miss D. E. M.A., D.Phil. — Dept. of Zool., Parks Rd., OXFORD, England
a. Development of connective tissue in the pupa: site of polymerization of collagen molecules (using labelled proline). *Galleria mellonella (Lepidoptera)*

ASHLEY, G. T. B.Sc., M.D. — Dept. of Anat., Univ. of Manchester, MANCHESTER 13, England
a. Normal and abnormal development of thoracic and pelvic viscera. Various spp. *(Vertebrata)*
b. Developmental cytology of the ovary. *(Vertebrata)*

ASLING, C. W. A.B., M.A., M.D., Ph.D., Prof. — Dept. of Anat., Univ. of California, BERKELEY 4, Calif, U.S.A.

ASSENMACHER, I. A. Dr.Méd., Dr.Sci., Prof. — Lab. de Physiol. anim., Fac. des Sci., Place Eugène Bataillon, MONTPELLIER (Hérault), France
a. Développement et physiologie de l'hypothalamus et de l'hypophyse. *Anas* spec. *(Aves)*

ASTAHOVA (DJAKONOVA), Mrs. I. N. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
a. Electron microscopical study of the crystalline lens in development. *Rana temporaria (Anura)*

ASTAUROV, B. L. Dr.Biol.Sci., corresp.-member Acad. Sci. U.S.S.R., M.I.I.E., M.Z.S.A., Prof. — Filatov Lab. of Exp. Embryol., Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12-a, MOSCOW V-133, U.S.S.R.
a. Artificial parthenogenesis and experimental polyploidy. *Bombyx mori (Lepidoptera)*
b. Induction of amphidiploidy in interspecific hybrids. *Bombyx mori, B. mandarina (Lepidoptera)* (in collaboration with Miss V. N. VEREJSKAYA)

AUBRY, Miss R. Lic.ès Sci., Dr.ès Sci. — Lab. de Biol. génér., Inst. de Zool. et de Biol. génér., Fac. des Sci., 12 Rue de l'Université, STRASBOURG, France

AUERBACH, R. Ph.D. — Dept. of Zool., Univ. of Wisconsin, Birge Hall, MADISON, Wis. 53706, U.S.A.
a. Spleen and thymus morphogenesis and transplantation; relation to immunity.
b. Inductive tissue interaction in vitro.

AUFSESS, Miss G.v. Dr.rer.nat. — Heiligenberg-Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik
a. Röntgeninduktion von Mutationen an Flügelschuppen. *Plodia interpunctella (Lepidoptera)*
b. Induktionsbedingungen der larvalen Diapause. *Plodia interpunctella (Lepidoptera)*
c. Die Rolle des Neuralleistenmaterials bei der Induktion der Augenlinse. *(Urodela)*

AUGSTEN, H. Dr.rer.nat.habil., Prof. — Botan. Inst. der Ernst-Moritz-Arndt-Univ., Grimmerstr. 88, GREIFSWALD, Deutsche Demokratische Republik
a. The relationship between metabolism and development in forms with different physiological activity. *Ficaria verna (Ranunculaceae), Triticum* spec. *(Gramineae)*

AUROUX, M. Dr.en Méd. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement normal et anormal de l'encéphale. *Mus rattus (Rodentia)*

AUSTIN, C. R. B.V.Sc., D.Sc., M.I.I.E. — Delta Regional Primate Research Center, Tulane Univ., COVINGTON, La. 70433, U.S.A.
a. Investigations on gametes, fertilization and early development. *(Polychaeta; Mollusca; Echinodermata; Reptilia; Mammalia)*
b. Induced and spontaneous anomalies of development. *(Mammalia)*
c. Karyotype studies on embryos developing after experimental treatments applied to gametes. *(Mammalia)*

AUTELIN, Miss R. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

AVEL, M. Dr., M.I.I.E., Prof. — Lab. de Biol. Génér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France

AVERKINA, Miss R. F. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.
a. Comparative study of organ specific antigens in embryos and adults. *Rana temporaria, R. ridibunda (Anura), Gallus domesticus (Aves)*
b. Study of organ-specific antigens in early developmental stages. *Gallus domesticus (Aves)*

AVILA, L. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

AVRAMOVIĆ (ČERMELJ), Mrs. N. B.Sc. — Inst. of Nuclear Sci. "Boris Kidrich", BELGRADE, Yugoslavia
a. Teratological changes in embryos produced by nucleic acids in early embryogenesis; effects on progeny of these animals. *Gallus domesticus (Aves)*

AX, P. Dr., Prof. — II. Zool. Inst. und Museum, Berlinerstr. 28, GÖTTINGEN, Deutsche Bundesrepublik

a. Descriptive and comparative embryology *Turbellaria; Oligochaeta; Polychaeta; Tardigrada)*

AYKAÇ, I. Veter.Dr. — Inst. of Histol. and Embryol., Med. Fac., Ankara Univ., ANKARA, Turkey
— temporarily: Institut d'Histol. et d'Embryol., Univ. de Liège, 20 Rue de Pitteurs, LIÈGE, Belgique
a. The embryonic development of plasma cells (morphology, histochemistry, ultrastructure). *Rattus norvegicus (Rodentia)*

AZOUBEL, R. M.D., Ph.D. — Dept. de Morfol. Humana Funcional e Aplicada, Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, SÃO PAULO, S.P., Brasil
a. Histochemistry of developing neurons. *(Vertebrata)* (in collaboration with A. R. CRUZ)
b. Mitotic activity in embryonic retina. *(Aves)*
c. Mitotic activity in retina before and after birth. *Rattus rattus (Rodentia)*

BABA, S. D.Sc. — Dept. of Botany, Fac. of Sci., Kyoto Univ., KYOTO, Japan
a. Histochemical study of cultured tissue (with electron microscope) (physiology and morphology). *Daucus carota* (in collaboration with L. W. ROBERTS, Moscow, Idaho)
b. Histochemical study of wound periderm formation (with electron microscope) (physiology and morphology). *Solanum tuberosum* (in collaboration with L. W. ROBERTS, Moscow, Idaho)
c. The effect of helminthosporol on xylogenesis (physiology). *Coleus blumei* (in collaboration with L. W. ROBERTS, Moscow, Idaho)

BACA, M. M.D. — Dept. of Pathol., Harbor General Hosp., TORRANCE, Calif., U.S.A.
a. Electron microscope studies on fertilization processes. *Homo sapiens (Primates)*

BACKHOUSE, K. M. M.B., B.S. — Dept. of Anat., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C.2, England
a. Gubernaculum testis and testicular descent. *(Mammalia)*
b. Early embryology and implantation. *Halichoerus grypus (Pinnipedia)*

BÄCKSTRÖM, S. A. A. Fil.Dr. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Characterization of reduction gradients. *(Echinoidea)*
b. Basic proteins during oogenesis and early development (biochemical and histochemical methods). *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*

BADE, E. G. M.D. — Inst. de Patol. Gener. y Exper., Fac. de Ciencias Med., Univ. Nac. de Cuyo, Casilla de Correo 513, MENDOZA, Argentina.
a. Liver regeneration: control of growth by tissue factors, submicroscopic structure of regenerating liver, protein and nucleic acid synthesis. *Mus musculus (Rodentia)*

BADÍNEZ, O. M.D., Prof. — Catedra de Embriol., Escuela de Med., Univ. de Chile, Zañartu 1042, SANTIAGO, Chile

BAEVSKY, J. B. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St.12, MOSCOW V-133, U.S.S.R.

a. Retardation of embryo development and state of maternal endocrine glands during the embryonic diapause. *Martes zibellina, Mustela vison (Carnivora), Rattus norvegicus, Mus musculus (Rodentia)*

BAFFONI, G. M. Dr.Biol.Sci., Prof. — Ist. di Anat. Comp., Fac. di Sci. Fis.Mat.e Nat., Via Berengario 14, MODENA, Italia

a. Growth and differentiation of the nervous cell. *(Cyclostomata; Teleostei; Amphibia; Aves; Mammalia)*
b. Mitotic ratio in the developing central nervous system. *(Amphibia)*
c. Sex-chromatin. *(Insecta)*
d. Oogenesis. *(Crustacea)*
e. Neurosecretion. *(Annelida; Mollusca)*

BAGIŃSKA (BORSUK), Mrs. I. M.D. — Inst. of pathol. Anat., Milit. Acad. of Med., Plac 9 Maja, ŁÓDŹ, Poland

a. Developmental pathology and experimental developmental morphology. *(Mammalia)*

BAGIŃSKI, S. M.D., Prof. (Emer.) — Narutowicza 94-9, ŁÓDŹ, Poland

a. Developmental genetics and pathology. *(Mammalia), Homo sapiens (Primates)*

BAGNARA, J. T. B.A., Ph.D., Prof. — Dept. of Zool., Univ. of Arizona, TUCSON, Arizona, U.S.A.

a. Various aspects of the development and endocrinology of pigmentation. Many spp. *(Amphibia)*
b. Functional development of pineal; extirpation, transplantation, and explantation of epiphysis. *Xenopus laevis (Anura)*
c. Developmental physiology of xanthophores, erythrophores, and iridophores. Many spp. *(Amphibia)*

BAIRATI, A. — Ist. di Genet., Univ. di Milano, Via Celoria 10, MILANO, Italia

a. Electron microscopy of tissues. *Drosophila* spec. *(Diptera)*

BAKER, Mrs. P. C. Ph.D. — Dept. of Pathol., Univ. of Oregon Med. School, PORTLAND, Ore. 97201, U.S.A.

a. The ultrastructural morphology of the gastrula stage. *Hyla regilla, Rana pipiens, Xenopus laevis (Anura)*

BALEGNO, H. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

BALINSKY, B.I. Dr.Biol.Sci., M.I.I.E., Prof. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, Republic of South Africa

a. An electron microscopic study of early development. *(Anura)*

BALLARD, W. W. Ph.D., Prof. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N. H., U.S.A.

a. Morphogenetic movements in embryos. *(Teleostei)*
b. Monograph on developmental anatomy. *Ambystoma* spec. *(Urodela)*

BALLS, M. B.A. — Station de Zool. expér., Univ. de Genève, Route de Malagnou, 154, Chêne-Bougeries, GENÈVE, Suisse
— temporarily (till September 1966): Biol. Dept., Reed Inst., PORTLAND, Ore. 97202, U.S.A.

BALON, E. K. Prom.biol., C.Sc. — Lab. of Fishery Science, Železná Studienka 806, BRATISLAVA, Czechoslovakia

a. Development of ossification. *Esox lucius (Teleostei)*

b. Embryology and eco-morphology. *Alburnus alburnus, Rutilus rutilus carpathorossicus* and their hybrids, *Hucho hucho, Thymallus thymallus* and their hybrids *(Teleostei)*
c. Further studies on development. *Tilapia* spec. *(Cichlidae, Teleostei)*
d. Normal and hybrid development. *(Acheilognathinae, Teleostei)* (in collaboration with J. J. DUYVENÉ DE WIT, Bloemfontein)
e. Development. *Umbra krameri (Teleostei)*

BALTUS, Miss E. J. Dr.en Sci. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

BALTZER, F. Dr., Dr.h.c. Strasb., Dr.h.c. Freiburg (Baden), M.I.I.E., Prof. (Emer.) — Zool. Inst. der Univ. Bern, Sahlistr 8, BERN, Schweiz

BAMFORD, D. R. B.Sc. — Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
a. Protein transport across the foetal intestine. *Rattus rattus (Rodentia)*

BAND, R. N. Ph.D., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich., U.S.A.
a. Studies on the mechanism of cell-to-cell adhesion. *Mayorella palestinensis (Amoebida, Protista)*

BANERJEE, B. M.Sc., M.S., Ph.D. — Entomol. Branch, Tea Research Ass., Tocklai Exper. Station, CINNAMARA, P.O., Assam, India
a. Reproductive physiology and histochemical distribution of phosphatases. *Odontotermes redemanni (Termitidae, Isoptera)*

BANKS, B. Dr. — Dept. of Chemistry, Univ. Coll. London, Gower St., LONDON W.C.1, England
a. The study of various proteins in the growth of cells in tissue culture. *Gallus domesticus (Aves)* (in collaboration with D. V. BANTHORPE, G. A. VERNON and Miss D. M. LAMONT)

BANTHORPE, D. V. Dr. — Dept. of Chemistry, Univ. Coll. London Gower St., LONDON W.C.1, England
a. The study of various proteins in the growth of cells in tissue culture. *Gallus domesticus (Aves)* (in collaboration with B. BANKS, G. A. VERNON and Miss D. M. LAMONT)

BAPAT, Miss S. M.Sc. — Dept. of Zool., Shivaji Univ., KOLHAPUR, Maharashtra State, India
a. Histochemistry of adult and developing epididymis; study of hydrolytic enzymes, lipids and carbohydrates. *Hirudo* sp. *(Hirudinea, Annelida)* (in collaboration with D. N. KAMAT)

BARASA, A. — Ist. di Anat. degli Animali domestici con Istol. ed Embriol., Univ. di Torino, Via Nizza 52, TORINO, Italia
a. Morphogenetic processes of the wing following removal of some parts. *Gallus domesticus (Aves)*
b. Mitochondria and lipochondria in cells cultured in vitro in various experimental conditions. *Gallus domesticus (Aves)*
c. Origin of binucleate cells in cultures. *(Aves)*
d. Effect of subnormal temperatures on mitosis of cells cultured in vitro. *(Aves)*

BARBERA (PARR), Mrs. M. B.S., M.S. — Dept. of Zool., Columbia Univ., 954 Schermerhorn Hall, NEW YORK, N.Y. 10027, U.S.A.

a. Relative amounts of nuclear RNA in embryos determined by microspectrophotometry; blastula, gastrula, neurula, *Rana pipiens (Anura)*
b. A chromosomal analysis of diploid and haploid racial hybrids. *Rana pipiens (Anura)*

BARBIERI, F. D. Dr., Prof. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289,
TUCUMAN, Argentina.
a. Metabolism of lactate, pyruvate and x-ketoglutarate in anaerobiosis; blastula stage; spectrophotometric methods. *Bufo arenarum (Anura)*
b. Intergeneric cross fertilization; a descriptive study including caryology and some experimental essays upon polyspermy. *Bufo arenarum ♀ x Leptodactylus chaquensis ♂ (Anura)*
c. Biological properties of the dialyzed egg foam (growth inhibiting, erythropenic, chromatophore-stimulating). *Leptodactylus bufonius (Anura)*

BARIGOZZI, C. Dr.Sci., M.I.I.E., Prof. — Ist. di Genet., Univ. di Milano, Via Celoria 10, MILANO, Italia
a. Development of melanomes with different genotypes. *Drosophila* spec. *(Diptera)*

BARKER, Mrs. J. NORTHROP B.S., M.A., Ph.D. — Dept. of Physiol., Jefferson Med. Coll., 1025 Walnut St., PHILADELPHIA 7, Pa., U.S.A.

BARRA, H. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

BARTELMEZ, G. W. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
— personal address: 224 Agnes Ave., MISSOULA, Montana, U.S.A.
a. Blood supply of uterus. *Macaca mulatta (Primates)*
b. Early development of optic vesicle. *(Rodentia; Primates)*
c. Earliest development of oral hypophysis. *(Primates)*
d. Effects of rubella on foetus. *Homo sapiens (Primates)*

BARTH, L.G. A.B., Ph.D., M.I.I.E., Prof. — Marine Biol. Lab., WOODS HOLE, Mass. 02543, U.S.A.

BARTH. Mrs. L. JAEGER A.B., M.A., Ph.D. — Marine Biol. Lab., WOODS HOLE, Mass. 02543, U.S.A.

BARTONE, J. C. B.S., M.S., Ph.D. — Dept. of Anat., George Washington Univ., 1335 H. Street, N.W., WASHINGTON, D.C., U.S.A.
a. Pyrimidine deoxyribonucleotides in developing tissues. *Sus scrofa (Artiodactyla)*
b. Bound (masked) lipids (lipoproteins) in development. *Sus scrofa (Artiodactyla)*

BARUA, D. N. Ph.D. (Cantab) — Bot. Branch, Tea Research Ass., Tocklai Exper. Station, CINNAMARA, P.O., Assam, India
a. Developmental physiology and experimental developmental morphology. *Camellia sinensis*

BATEMAN, A. J. B.Sc., Ph.D., D.Sc. — Paterson Labs, Cytogenet. Dept., Christie Hosp. and Holt Radium Inst., Withington, MANCHESTER 20, England
a. The development of embryos with genotypes which are lethal because of aneuploidy or partial aneuploidy (progeny of translocation heterozygotes). *Mus musculus (Rodentia)*

BATTAGLIA, B. Sc.D., Prof. — Ist. di Zool., Anat. comp. e Genet., Fac. di Sci., Via Loredan 10, PADOVA, Italia
(no embryological work in progress)

BATTLE, Miss H. I. Ph.D., Prof. — Dept. of Zool., Univ. of Western Ontario, LONDON, Ontario, Canada
a. Effects of purine antagonists, particularly chloramphenicol, on early developmental processes. *Salmo trutta fario, Brachydanio rerio (Teleostei)*
b. Effects of vital dyes on early developmental processes. *Salmo trutta fario, Brachydanio rerio (Teleostei)*
c. Comparative effects of selective inhibitors of amino acid synthesis, protein synthesis and RNA synthesis on early developmental processes. *Salmo trutta fario, Brachydanio rerio (Teleostei)*

BAUMANN, J. A., Dr., Prof. — Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue de l'Ecole de Médecine, GENÈVE. Suisse

BAUME, L. J. M.S., D.M.D., Prof. — Inst. de Méd.Dentaire, 30 Rue Lombard, GENÈVE, Suisse

BAVAY, J. M. F. X. de B.Sc. — Dept. of Zool., Univ. of New England, ARMIDALE 5 N., N.S.W., Australia
a. Normal embryology. *Kyarranus sphagnicolus (Leptodactylidae, Anura)*

BAXTER, E. W. B.Sc., Ph.D. — Biol. Dept., Guy's Hosp. Med. School LONDON S.E.1, England
a. Biology, including development and metamorphosis. *Petromyzon* spec. *(Cyclostomata)*
b. Food changes during larval period of growth. *Ammocoetes (Cyclostomata)*
c. Uptake and fate of "Thorostrast". *Ammocoetes (Cyclostomata)*
d. Effects of the anaesthetic M.S.222-Sandoz. *Lampetra planeri (Cyclostomata)*

BEAMS, H. W. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a. Electron micrographic studies in oogenesis.

BEARN, J. G. M.B., B.S. — Anat. Dept., Middlesex Hosp. Med. School, LONDON W.1, England

BEATTY, R. A. B.A., M.A., Ph.D., M.I.I.E. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Breeding of genetically tagged strains for use in experimental embryology. *Oryctolagus cuniculus (Lagomorpha)*
b. Heterospermic insemination and growth of embryo. *Oryctolagus cuniculus (Lagomorpha)*
c. Developmental biology and genetics of gametes. *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

BEAUDOIN, A. R. — Dept. of Anat., Med. School, Univ. of Michigan, 4500 East Med. Bldg., ANN ARBOR, Mich., U.S.A.
a. Experimental teratology: investigations into the mechanism of action of chemical teratogens and the analysis of the developmental malformations produced.

BEAUPAIN, R. Drs. — Dépt. de l'Euratom, Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Analyse cythochimique et autoradiographique de l'interaction des deux parties des associations de cellules cancéreuses KB et Hela et d'organes embryonnaires. *Gallus gallus (Aves)*

BECK, F. M.D., Ch.B., M.I.I.E. — Dept. of Anat., Univ. Coll. of South Wales and Monmouthshire, CARDIFF, Wales

a. The effect of trypan blue on development. *(Mammalia)*
b. Embryonic nutrition. *(Mammalia)*

BEDFORD(SELWOOD), Mrs. L. B.Sc., M.Sc. — Zool. Building, School of Biol. Scis., Univ. of Sydney, SYDNEY, N.S.W., Australia

a. Descriptive, experimental and physiological embryology. *Bembicium nanum (Littorinidae, Mesogastropoda)*
b. Descriptive morphology and physiology of oogenesis, utilizing cytochemistry, autoradiography and electron microscopy. *Sypharochiton septentriones (Amphineura, Mollusca)*

BEERMANN, W. Dr.rer.nat., M.I.I.E., Prof. — Max Planck Inst. für Biol., Spemannstr. 34, TÜBINGEN, Deutsche Bundesrepublik

a. Development of nucleolus-less embryos, descriptive and biochemical. *Chironomus tentans (Diptera)*
b. Reversibility of puffing and differentiation in salivary glands. *Chironomus tentans (Diptera)*

BEETSCHEN, J. Cl. Dr.ès Sci., Prof. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE, France

a. Recherches cytologiques, embryologiques et génétiques sur l'hétéroploïdie expérimentale. *(Amphibia)*
b. Hybridation interspécifique. *(Amphibia)*
c. Altérations de la morphogenèse de l'oeil chez les embryons aneuploïdes. *Pleurodeles waltlii (Urodela)*
d. Etude autoradiographique du métabolisme des germes hétéroploïdes létaux. *Pleurodeles waltlii (Urodela)* (en collaboration avec Mrs. A. M. DUPRAT)
e. Etude d'un facteur récessif semi-létal, ac. *Pleurodeles waltlii (Urodela)* (en collaboration avec A. JAYLET)
f. Métamorphose induite expérimentalement par la thyroxine. *(Amphibia)*

BELKA-GRZYBEK, Mrs. A. Ph.D. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland

a. Restoration of the surrenal gland after experimental injury. *Mus musculus (Rodentia)*
b. Cytological and histochemical investigations on the regenerating tail. *Xenopus laevis (Anura)*

BELL, E. B.A., M.Sc., Ph.D. — Dept. of Biol., Massachusetts Inst. of Technol., CAMBRIDGE, Mass.02139, U.S.A.

a. Development of skin and feathers. *Gallus gallus (Aves)*
b. Biochemical and biophysical analysis of keratin synthesis in development of skin and feathers. *Gallus gallus (Aves)*
c. Protein synthesis, RNA and DNA synthesis during development; their regulation and relation to cytodifferentiation. *Spisula solidissima (Mollusca), Gallus gallus (Aves)*

BELL, L. G. E. B.Sc., Ph.D., A.R.I.C., M.I.Biol. — Dept. of Zool., King's Coll., Strand, LONDON W.C.2, England

BELLAIRS, A. d'A. D.Sc. — Dept. of Anat., St. Mary's Hosp. Med. School, LONDON W.2, England

a. Morphogenesis of skeleton. *(Reptilia; Aves; Mammalia)*
b. Embryonic membranes. *(Reptilia)*
c. Regeneration. *(Reptilia)*

BELLAIRS, Mrs. M. R. B.Sc., Ph.D., M.I.I.E. — Dept. of Anat., and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. An electron microscopical and histochemical analysis of yolk formation. *Gallus domesticus (Aves)*
b. An electron microscopical study of oogenesis. *Gallus domesticus (Aves)* (in collaboration with Miss M .L GREENFIELD)

BELLINI-CARDELLINI, Miss L. Ph.D. — Ist. di Zool. e Anat. Comp., Fac. di Sci., Univ. degli Studi, Piazza F. Marchetti, CAMERINO, Italia
a. Biochemical changes in the course of development. *(Amphibia)*

BELOUSOV, L. W. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
a. Cell migration and cell proliferation in morphogenesis. Relations between cellular activities and the species-specific pattern of the whole organism. *Obelia loveni, Dynamene pumila, Clava multicornis (Hydrozoa)*
b. The application of the biological field theory to the above problems. *Obelia loveni, Dynamene pumila, Clava multicornis (Hydrozoa)*
c. The problem of egg organization. *Obelia loveni, Dynemene pumila, Clava multicornis (Hydrozoa)*

BELSARE, D. K. B.Sc., M.Sc., Ph.D. — Post-Graduate Dept. of Zool., Univ. of Nagpur, NAGPUR, India
a. Development of the pituitary gland. *Ophicephalus punctatus (Ophicephalidae, Teleostei)*
b. Development of the gonads. *Channa punctatus (Ophicephalidae), Notopterus notopterus (Notopteridae, Teleostei)*
c. Studies on germ cells (descriptive and experimental). *Channa punctatus (Ophicephalidae, Teleostei)*
d. Descriptive embryology. *Heteropneustes fossilis (Siluridae), Gambusia affinis (Poecilidae), Notopterus notopterus (Notopteridae), Mastocembalus pancalus (Mastocembalidae, Teleostei)*

BENAZZI (LENTATI), Mrs. G. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Ovo- and spermatogenesis; fertilization and cytology. *(Tricladidea, Turbellaria)*

BENAZZI, M. M.I.I.E., Prof. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Fertilization, pseudogamy, polyploidy and heredity. *(Tricladidea, Turbellaria)*
b. Action of X-rays on development. *(Tricladidea, Turbellaria)*
c. Study of sex. *Bacillus rossius (Phasmidae, Orthoptera)*

BENDER, H. A. A.B., M.S., PH.D. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind., U.S.A.
a. Phenogenetic studies of the ovarian tissue of female-sterile mutants. *Drosophila melanogaster (Diptera)*

BENIRSCHKE, K. M.D., Prof. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

a. Study of fetal adrenal development. *Dasypus novemcinctus (Edentata), Oedipomidas oedipus (Primates)*
b. Chromosome studies. *Dasypus novemcinctus (Edentata)*
c. Study of placentation, fetal development and drug toxicity on the embryo. *Dasypus novemcinctus (Edentata)*
d. Comparative chromosome studies. *(Equidae, Camelidae, Artiodactyla)*

BENNETT, Mrs. D. Dr. — Dept. of Anat., Med. Coll., Cornell Univ., 1300 York Avenue, NEW YORK N.Y. 10021, U.S.A.
a. Developmental genetics. *Mus* spec. *(Rodentia)*

BENOIT, J. Dr. en Méd., Dr.ès Sci., Prof. — Lab. d'Histophysiol., Coll. de France, 4 Avenue Gordon Bennett, PARIS XVIe, France
a. Action of DNA on racial characters. *Anas platyrynchos (Aves)*

BENOIT, J. A. A. M.I.I.E. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Etude du développement de la columelle auriculaire. *Gallus gallus (Aves)*

BER, A. M.D., M.V.D., Prof. — Endocrinol. Unit of the Rogoff Med. Res. Inst., Beilinson Hospital, PETAH-TIKVA, Israel
a. Development of eye reaction to vitamin B1. *Hyla* spec., *Bufo* spec., *Pylobates* spec. *(Anura)*

BERENDSEN, W. Drs. — Centrum voor Submicroscopisch Onderzoek van Biologische Objecten, Janskerkhof 3, UTRECHT, Netherlands
a. Experimental morphology of cytoplasmic structures in early developmental stages. *Limnaea stagnalis (Pulmonata, Gastropoda)*

BERG, K. G. Fil.mag. — Zool. Inst., Univ. of Gothenburg, Fjärde Långgatan 7B, GÖTEBORG-SV, Sweden
a. Electronmicroscopical studies on cuticular development. Hydra spec. *(Hydroidea)*

BERG, W. E. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Calif., U.S.A.
a. Protein synthesis during early development. *Lytechinus* spec. *(Echinoidea)*

BERGQUIST, H. Ph.D., M.I.I.E. — Zool. Inst., Univ. of Gothenburg, Fjärde Långgatan 7B. GÖTEBORG-SV, Sweden
a. Experimental investigations on the neural tube. *(Vertebrata)*
b. Ultramicroscopical investigations on the integument. *Homarus vulgaris (Crustacea), (Invertebrata)*

BERNARD, CL. Lic.es Sci. — Lab. de Physiol. anim., Fac. des Sci., Route de Limoges, POITIERS (Vienne), France
a. Electrophysiological study of the embryonic heart. *Rattus norvegicus, Cavia porcellus (Rodentia)*

BERNDORFER, A. Dr.med.habil. — Childrens Hosp. "Paul Heim", Dept. for congenital malformations, Üllöi ut 86, BUDAPEST VIII, Hungary — Private address: Benczur utca 39/a, BUDAPEST VI, Hungary
a. Clinical embryopathology.
b. Intrauterine regenerations of congenital malformations.
c. Biological study of malformations.
d. Etiology of malformations from clinical viewpoints.

BERNSTEIN, G. S. B.A., M.A., Ph.D — Dept. of Pharmacol., School of Med, Univ. of Southern California, LOS ANGELES, Calif., U.S.A.

BERREUR (BONNENFANT), Mrs. J. Dr. de 3ième Cycle — Lab. de Génét. évolutive du C.N.R.S., GIF-sur-Yvette (S.et O.), France
  a. Contrôle hormonal de la différenciation sexuelle. *(Isopoda, Crustacea)*
  b. Recherches sur les contrôles endocrines de la gamétogénèse par la culture in vitro. *(Malacostraca, Crustacea)*

BERRILL, N. J. Ph.D., D.Sc., F.R.S., Prof. — Dept. of Zool., McGill Univ., MONTREAL, Quebec, Canada
  a. Regeneration; metamorphosis; asexual reproduction (histogenesis). *Branchiomma (=Dasychone) cingulata (Sabellidae, Polychaeta)*

BERTALANFFY, F. D. M.Sc., Ph.D. — Dept. of Anat., Fac. of Med. and Dentistry, Univ. of Manitoba, WINNIPEG 3, Manitoba, Canada
  a. Rates of cell division of regenerating epidermis following cutaneous incision. *Rattus rattus (Rodentia)*
  b. Cell renewal and cytodynamics of normal cell populations. *Rattus rattus (Rodentia)*

BERTMAR, G. Fil.Dr. — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden
  a. Development and morphology of the skeleton of the head. *(Dipnoi; Characidae, Teleostei)*

BERTOLINI, B. Dr.Biol.Sci. — Ist. di Anat. comp. "G.B.Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia

BETCHAKU, T. M.Sc. — Central Electron Microscope Lab., School of Life Science, Univ. of Illinois, URBANA, Ill., U.S.A.
  a. Histogenesis of regeneration blastema. *(Planariidae, Turbellaria)*
  b. Culture of cells in vitro. *(Planariidae, Turbellaria)*
  c. Fine structure of cells (electron microscopy). *(Planariidae, Turbellaria)*

BEYLSTEIN, J. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

BHATNAGAR, Miss. P. L. B.S., Ph.D. — Dept. of Physiol., Med. Research Building, Miami Univ., 1600 N.W. 10th Ave., MIAMI, Fla. 33136, U.S.A.
  a. Physiological basis of aging, growth and metamorphosis. *Musca domestica (Diptera)* (in collaboration with M. ROCKSTEIN)
  b. Effects of X-irradiation on development, aging, and longevity. *Musca domestica (Diptera)* (in collaboration with M. ROCKSTEIN)

BHATTACHERJEE, S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India
  a. Induced changes. *(Hydroidea)* (in collaboration with S. MOOKERJEE, J. MITRA and A. CHAKRAVARTY)

BHUSSRY, B. R. D.D.S., Ph.D., Prof. — Dept. of Anat., School of Med., Georgetown Univ., 3900 Reservoir Road, N.W., WASHINGTON D.C. 2007, U.S.A.
  a. Effect of sodium fluoride on developing teeth. *Rattus rattus (Rodentia)*
  b. Effect of vitamin D deficiency on developing bone. I. High calcium-phosphorus ratio diet. *Rattus rattus (Rodentia)*

BIEBER, S. B.A., M.S., Ph.D. — Assoc.Dean, Graduate Facs., Long Island Univ., 385 Flatbush Avenue Extension, BROOKLYN, N.Y. 11201, U.S.A.

a. Nucleic acid metabolism during gametogenesis, embryogenesis and regeneration; studies carried out with the aid of analogues of purines and pyrimidines, and with radioisotope-labeled nucleic acid derivatives. *Rana pipiens (Anura)*

BIELANSKA (OSUCHOWSKA), Mrs. Z. Dr., Prof. — Veter. Inst. of Histol. and Embryol., High School of Agricult., Grochowska 272, WARSZAWA, Poland

a. Histochemical studies on differentiation of gonads. *Sus domestica (Artiodactyla)* and other spp. *(Vertebrata)*

BIELIAVSKY, N. Lic.en Sci.Zool. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

a. Incorporation de précurseurs radioactifs dans les oeufs en segmentation. *Pleurodeles Waltlii (Urodela)*

b. Incorporation de précurseurs radioactifs dans les hybrides létaux. *Bufo arenarum ♀ x Rana temporaria ♂ (Anura)*

BIER, K. Dr.rer.nat., Prof. — Zool. Inst. der Univ. Münster, Badestr. 9, 44 MÜNSTER (Westf.), Deutsche Bundesrepublik

BIERNE, J. — Lab. de Biol. génér., Fac. des Sci., B.P.347, REIMS (Marne), France

a. Development of ovaries after decapitation. *Lineus ruber (Anopla, Nemertini)*

b. Transplantation and regeneration (somatic and germinal). *Lineus* spp. *(Anopla, Nemertini)*

c. Experimental studies of regenerative rhynchogenesis (grafts, organotypic culture, inhibitory action of various substances). *Lineus ruber (Anopla), Amphiporus* spec. *(Enopla, Nemertini)*

BIGGELAAR, J. A. M. v.d. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a. Nucleic acid metabolism during early developmental stages. *Limnaea stagnalis (Gastropoda)*

b. Synthesis of proteins during early developmental stages. *Limnaea stagnalis (Gastropoda)*

BIGGERS, J. D. Ph.D., F.R.C.V.S., Prof. — King Ranch Lab. of Reproductive Physiol.,School of Veter. Med., Univ. of Pennsylvania, 25th and Locust Streets, PHILADELPHIA 4, Pa., U.S.A.

a. Organ culture of fallopian tubes and ovaries. *(Mammalia)*

b. Culture of eggs. *(Mammalia)*

c. Nutrition of embryonic cartilage. *(Vertebrata)*

d. Reproduction and embryology of wild animals. *(Mammalia)*

BIJTEL, Miss J. H. Dr.Sc., M.D., M.I.I.E. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands

a. Experiments concerning the factors which determine the normal course of the outgrowing pronephric duct. *Ambystoma mexicanum, Triturus taeniatus, Xenopus laevis (Amphibia)*

b. Development and phylogenetic origin of the columella auris. *Ambystoma mexicanum, Triturus taeniatus, Xenopus laevis (Amphibia)*

c. Development of the naso-lacrimal duct. *Xenopus laevis (Anura), Mus musculus (Rodentia)*

BILLETT, F. S. B.Sc., Ph.D. — Dept. of Biol. as Applied to Med., Middlesex Hosp. Med. School, LONDON W.1, England
a. Morphogenetic effects of desoxyribonucleic acid. *Ambystoma mexicanum, Xenopus* spec. *(Amphibia)*
b. Effect of nucleic acid "anti-metabolites" on early development. *Gallus* spec., *Coturnix* spec. *(Aves)*

BILLINGTON, W.D. B.Sc., Ph.D. — Dept. of Zool., Parks Rd., OXFORD, England
a. The invasive, hormonal, and immunological properties of the trophoblast. *Mus musculus (Rodentia)*

BIRGE, W. J. B.A., M.S., Ph.D., Prof. — Univ. of Minnesota, MORRIS, Minn., U.S.A.

BISHOP, D. W. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington. 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a. Contractile protein and contractile mechanisms of spermatozoa. *(Mammalia)*
b. Development of immunologic capacity. *Cavia* spec. *(Rodentia)*
c. Immunologic impairment of spermatogenesis. *Cavia* spec. *(Rodentia)*

BISHOP, M. W. H. M.A., Ph.D. — Dept. of Animal Husbandry, Univ. of Bristol, Langford House, Langford, BRISTOL, England
a. Investigations on gametes, fertilization and early development. *(Mammalia)*

BISHOP (CALAME), Mrs. S. M. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
a. Organogenèse du système urogénital. *Gallus gallus (Aves)*
b. Culture in vitro du métanephros. *Gallus gallus (Aves)*

BLACK, R. E. B.A., Ph.D., Prof. — Dept. of Biol., Coll. of William and Mary, WILLIAMSBURG, Va., U.S.A.
a. Use of isotopes to trace metabolic pathways in embryos. (marine *Invertebrata)*
b. Development of enzymes related to Krebs cycle in embryos. (marine *Invertebrata)*

BLACKLER, A. W. B.Sc., Ph.D., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.
a. Causal analysis of formation and differentiation of sex cells. *Xenopus laevis, Rana* spp. *(Anura)*
b. Nucleo-cytoplasmic relationships. *Xenopus spp., Rana spp. (Anura)*

BLANDAU, R. J. Ph.D., M.D. — Dept. of Biol. Structure, School of Med., Univ. of Washington, SEATTLE 5, Wash., U.S.A.
a. Mechanisms of ovulation.
b. Mechanisms of implantation.
c. Tissue culture of granulosa cells.
d. Primordial germ cells. *Mus* spec., *Cricetus* spec., *Cavia* spec. *(Rodentia)*

BLAXTER, J. H. S. M.A. — Dept. of Natural Hist., The Univ., ABERDEEN, Scotland
a. Rearing of larvae. *Clupea pilchardus (Teleostei)*

b. Development of the eye in the larva, using histological techniques (including electron microscope) and physiological experiments. *Clupea pilchardus, Pleuronectes Platessa (Teleostei)*

BLECHSCHMIDT, E. Dr.med., o.ö.Prof. — Anat. Inst. der Univ., Kreuzbergring 36, GÖTTINGEN, Deutsche Bundesrepublik

a. Elektronenmikroskopie des Nervensystems. *Homo sapiens (Primates)*

BLOCK, M. H. Ph.D., M.D., Prof. — Univ. of Colorado Med. Center, 4200 E. 9th Ave., DENVER 20, Colo., U.S.A.

a. Development of blood-forming tissues. *Didelphys virginiana (Marsupialia)*

b. Effect of irradiation on development of blood-forming tissues. *Didelphys virginiana (Marsupialia)*

c. Iron metabolism of blood-forming tissues. *Didelphys virginiana (Marsupialia)*

d. Wound healing of blood-forming tissues. *Didelphys virginiana (Marsupialia)*

e. Development of antibodies and correlation with development of hemopoietic tissues. *Didelphys virginiana (Marsupialia)*

f. Role of thymus in development of lymphocytes in lymph nodes and spleen. *Didelphys virginiana (Marsupialia)*

g. Experimental embryology. 1. Development of lymphatic tissue. 2. Atrophy of myeloid tissue. 3. Development of immunologic competence. *Didelphys virginiana (Marsupialia)*

BLOM, E. Dr.med.vet. — State Verter. Serum Lab., Bülowsvej 27, COPENHAGEN V, Denmark

a. Studies on pathological conditions in the testis, epididymis and accessory sex glands. *Bos taurus (Artiodactyla)* (in collaboration with N. O. CHRISTENSEN)

BLONDHEIM, Mrs. S. A. M.Sc., — Dept. of Entomol. and Venomous Animals, Hebrew Univ., JERUSALEM, Israel

a. Environmental factors influencing development of eggs. *Locusta migratoria migratorioides, Nomadacris septemfasciata (Acrididae. Orthoptera)*

BLOUNT, R. F. B.A., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A

BLUEMINK, J. G. M.Sc. — Hubrecht Lab. (Intern.Embryol.Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a. The mechanism of the uptake of egg capsule fluid by pinocytosis. *Limnaea stagnalis (Gastropoda)*

b. Electron microscopical investigation of primary differentiation in normal development and under experimental conditions. *Ambystoma mexicanum (Urodela)*

BLUNT, M. H. Ph.D., M.R.C.V.S. — Dept. of Anat., Fac. of Rural Sci., Univ. of New England, ARMIDALE, N.S.W., Australia

a. Development of blood system. *Ovis* spec. *Bos* spec. *(Artiodactyla)*

BODEMER, C. W. B.A., M.A., Ph.D. — School of Med., Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.

a. Electrophysiology of developing nervous system. *Didelphys virginiana (Marsupialia)*

BODENSTEIN, D. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.
a. Nerve regeneration. *Periplaneta americana (Orthoptera)*
b. Intergeneric grafts of organ discs. *(Diptera)*
c. The role of the prothoracic gland in postembryonic development. *Periplaneta americana (Orthoptera)*

BOELL, E. J. Ph.D., M.A., D.Sc., M.I.I.E. — Dept. of Biol., Josiah Willard Gibbs Research Lab., Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
a. Enzymatic changes in mitochondria during development *(Amphibia; Aves)*
b. Hemoglobin synthesis during embryogenesis. *(Aves)*

BOHN, H. Dr.rer.nat. — Zool. Inst. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik
a. Regeneration and transplantation experiments on limbs; polarity and gradient systems. *Leucophaea maderae, Periplaneta americana (Blattaria, Orthoptera)*

BOLOGNARI, A. Prof. — Ist. di Zool. e di Anat. Comp., Univ. di Messina, MESSINA, Italia
a. Ricerche sull'ovogenesi; particolari osservazioni sul nucleolo mediante il microscopio ottico ed elettronico. *Haliotis lamellosa, Aplysia depilans, Patella coerulea (Gastropoda), Mytilus galloprovincialis (Lamellibranchia)*
b. Ricerche al microscopio ottico e al microscopio elettronico sulla vitellogenesi. *Haliotis lamellosa, Aplysia depilans, Patella coerulea (Gastropoda), Paracentrotus lividus, Sphaerechinus granularis, Arbacia lixula (Echinoidea)*
c. Studio citologico comparativo fra ovociti in accrescimento e cellule tumorali. *(Mollusca et Echinodermata; Mammalia)*
d. Ricerche sulla struttura, sull'ultrastruttura e sul citochimismo dei globuli vitellini degli ovociti. *Planorbis corneus (Pulmonata, Gastropoda)* (in collaborazione con Mrs. M. P. ALBANESE)
e. Indagini al microscopio di fluorescenza sul nucleolo e sul vitello degli ovociti. *(Mollusca; Echinodermata)*

BONDI, C. Dott., Prof. — Ist. di Anat. comp., Fac. di Sci., PERUGIA, Italia
a. Rigenerazione. *Planaria lugubris (Turbellaria)*
b. Trapianti xenoplastici e differenziazione. *Triturus* spec., *Rana* spec. *(Amphibia)*
c. Morfogenesi dell'intestino. *Bufo* spec. *(Anura)*
d. Morfologia e ultrastruttura dello spermio. *Branchiobdella pentodonta (Oligochaeta)*

BONNER, J. T. Ph.D., M.I.I.E. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J. 08540, U.S.A.
a. Problems of morphogenetic movements and differentiation. *(Acrasiales)*

BONS, J. — Dépt. de Biol.anim., Fac. des Sci., Av. Moulay-Chérif, RABAT, Morocco

BONTING, S. L. Ph.D. — Sect. on Cell Biol., Ophthalmol. Branch, Nat. Inst. of Neurol. Diseases and Blindness, Natl.Insts. of Health, BETHESDA, Md. 20014,U.S.A.
a. Development of Na-K activated ATPase in kidney and lung, in vivo and in vitro. *Mus musculus (Rodentia)*

b. Development of Na-K activated ATPase and carbonic anhydrase in ciliary processes from birth till maturity, as correlated with the development of aqueous humor secretion in the eye. *Oryctolagus cuniculus (Lagomorpha)*

BOOKHOUT, C. G. A.B., M.A., Ph.D., Prof. — Duke Univ. Marine Lab., BEAUFORT, N.C. 28516, and Dept. of Zool., Duke Univ., DURHAM, N.C., U.S.A.

a. The development from the egg to the sixty-day stage; egg deposition, culture methods, day to day observations and records of living larvae and juveniles, study of fixed and sectioned material. *Marphysa regalis, Cirriformia spirabrancha (Polychaeta)*

b. Larval development and the effect of variations in salinity on molting frequency and the time of development. *Pagurus alatus (Decapoda)*

c. Effects of various temperatures and salinities on molting frequency, larval stages and metamorphosis. *Ovalipes ocellatus, Dissodactylus mellitae, Rhithropanopeus harrisii (Decapoda, Crustacea)*

d. Range of salinity and temperature tolerance of larvae from various geographical regions in the United States and Europe. *Rhithropanopeus harrisii, (Decapoda, Crustacea)*

BOONE, M. A. B.S., M.S., Ph.D., Prof. — Poultry Science Dept., Clemson Univ., CLEMSON, S.C. 29631 U.S.A.

a. Effect of anticarcinogens and cyclic drugs on embryonic development. *Gallus domesticus (Aves)*

b. Use of P^{12} to determine the distribution of spermatozoa in the oviduct. *Gallus domesticus (Aves)*

c. Effect of high ambient temperature on semen and egg production. *Gallus domesticus (Aves)*

BOPP, M. Dr. rer. nat., Prof. — Inst. für Botanik, Techn. Hochschule, Herrenhäuser Str. 2, 3 HANNOVER, Deutsche Bundesrepublik

a. Crown-gall development and initiation. *Bryophyllum dangremontianum*

b. Development; morphogenesis of protonema. *Funaria hygrometrica (Bryophyta)*

BORGHESE, E. M.D., Dr.Biol.Sci., M.I.I.E., Prof. — Ist. di Anat. topogr., Univ. di Napoli, Via L. Armanni 5, NAPOLI, Italia

a. Culture in vitro of embryonic organs. *Mus musculus (Rodentia)*

b. Effect of ionizing radiations on embryonic development. *(Mammalia)*

c. Embryology of kidney. (Teleostei)

BORISOV, I. N. Kand.biol.sci. — Chair of Histol. and Embryol., Archangelsk State Med. Inst., Av. p. Vinogradov 51, ARCHANGELSK, U.S.S.R.

a. Striated muscle histogenesis. *Rana esculenta (Anura), Gallus bankiva domestica, Columba livia (Aves)*

b. Early histogenesis of striated muscle. *Mus musculus (Rodentia)*

c. Sources and histogenesis of striated muscles. *Huso huso (Chondrostei), Salmo salar (Teleostei)*

BOROJEVIC, R. Dipl.Biol. (Zagreb), Dipl.Etudes Sup. — Lab. de Biol. génér., Fac. des Sci. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France

a. Descriptive and experimental morphology, morphogenesis. *(Porifera)*

BORELLI, Miss A. P. Dr.Biol.Sci. — Ist. di zool., dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italia
a. Growth and diferentiation of regeneration blastema in vivo and in vitro. *Planaria torva, Dugesia etrusca (Turbellaria)* (in collaboration with P. PASQUINI)

BORSTEL, R. C. von Ph.D. — Biol. Div., Oak Ridge National Lab., P. O. Box Y, OAK RIDGE, Tenn. 37831, U.S.A.
a. Induction of chromosomal puffs in larval salivary glands by ribonuclease; cytidine uptake and net amounts of RNA and protein of these puffs. *Drosophila buskii (Diptera)*

BORSUK, Mrs. R. A. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
a. The effect of light as a specific retina irritant on Wolffian lens regeneration, in particular the influence of different parts of the visible spectrum, and of different light intensities on the morphophysiological connections between retina and lens. *(Urodela)*

BOSCHKOW, D. M.Sc. — Inst. of Zool., Bulgarian Acad. of Sci., Bul. Ruski 1, SOFIA, Bulgaria

BOSCHWITZ, Miss B. D. M.Sc., Ph.D. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
a. Seasonal changes in the parathyroid. *Bufo viridis (Anura)*
b. Seasonal changes in the ultimobranchial body. *Bufo viridis (Anura)*
c. Motor end plates during metamorphosis. *Hyla arborea (Anura)*

BOSSHARD, H. J. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

BOSSY, J. G. M. Dr., Prof. — Lab. d'Anat., Fac. de Méd., B.P.38, CLERMONT-FERRAND, France
a. Study of melanotic embryo of 15 mm V.C. *Homo sapiens (Primates)*
b. Mitotic index in the ependymal layer of the embryonic brain: topographic variations. *Homo sapiens (Primates)*
c. Development of the mucous lining of the auditory tube. *Homo sapiens (Primates)*

BOTERENBROOD, Miss E. C. Ph.D. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a. Organization of prosencephalic structures after dis- and re-aggregation of the prosencephalic part of the neural plate. *Triturus alpestris, Pleurodeles waltlii (Urodela)*

BOTH, N. J. de M.Sc. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a. Transplantation of limb regeneration blastemas: the role of mesenchymal mass in regional organization. *Ambystoma mexicanum (Urodela)*

BOTTE, V. Veter.Dr. — Ist. di Zool. e Anat. Comp., Fac. di Sci., Univ. degli Studi, Piazza Filippo Marchetti, CAMERINO, Italia
a. Sex differentiation and experimental sex reversal. *(Amphibia; Aves)*
b. Histochemical and biochemical changes in the course of development. *(Pisces; Amphibia; Aves)*

BOUILLON, J. Ph.D., Prof. — Lab. de Zool. syst. et de Biol. anim., Fac. des Sci., Univ. libre de Bruxelles, 50 Avenue F. D. Roosevelt, BRUXELLES, Belgique

a. Embryology, regeneration, asexual reproduction and development *(Anthomedusae, Leptomedusae, Limnomedusae, Trachymedusae, Narcomedusae, Hydrozoa)*

BOUNOURE, L. Prof. — Lab. de Biol. génér., Inst. de Zool. et de Biol. génér., Fac. des Sci., 12 Rue de l'Université, STRASBOURG, France

BOVBJERG (BLANCHARD), Mrs. A. M. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a. Skin grafting: factors affecting graft rejection and the nature of the immune reaction. *Rana pipiens, R. catesbeiana (Anura)*

b. Time and nature of determination of some areas of skin. *Rana pipiens (Anura)*

BÖVING, B. G. A.B., M.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210 U.S.A.

a. Blastocyst spacing, orientation and implantation mechanisms. *Oryctolagus cuniculus (Lagomorpha)*

b. Relation of trophoblast invasion to bloodvessels underlying uterine epithelium, and the anatomical, mechanical and chemical basis for it. *Oryctolagus cuniculus (Lagomorpha)*

c. Identification and function of non-cellular blastocyst coverings. *Oryctolagus cuniculus (Lagomorpha)*

BOYD, J. D. M.A., D.Sc., M.D., M.I.I.E., Prof. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

a. The development and structure of the placenta. *Homo sapiens (Primates)* (in collaboration with W. J. HAMILTON, London)

BOYDE, A. B.D.S., Ph.D. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E.1, England

a. Dental enamel development; descriptive morphology of enamel development, using electron microscopy, scanning electron microscopy, scanning probe X-ray microanalysis. *(Mammalia)*

BOYDEN, E. A. Ph.D., Prof. — (Emer.Prof.) Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
— (Research Prof.) Med. School, Univ. of Washington, SEATTLE 5, Wash., U.S.A.

a. Postnatal growth of the lungs (from late fetal stage to adult). *Canis* spec. *(Carnivora)*, *Homo sapiens (Primates)*

b. Embryonic explanation of intraluminal diverticulum of duodenum. *Homo sapiens (Primates)*

BRACHET, J. L. A. M.D., D.Sc., M.I.I.E., Prof. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

a. Studies on the metabolism of lethal hybrids. *(Amphibia)*

b. Effects of actinomycin D and puromycin on morphogenesis. *(Amphibia)*

c. Effects of histones and nucleic acids on morphogenesis. *(Amphibia)*

d. Studies on protein synthesis in anucleate eggs. *Arbacia* spec. *(Echinoidea)*

BRADEN, A. W. H. M.Sc., Ph.D. — Div. of Anim. Physiol., C.S.I.R.O., Ian Clunies Ross Anim. Res. Lab., Great Western Highway, (P.O. Box 144, Parramatta), PROSPECT, N.S.W., Australia

a. Fertilization. *Ovis* spec. *(Artiodactyla)*

b. Prenatal mortality. *Ovis* spec. *(Artiodactyla)*

BRAHMA, S. K. M.Sc., D.Phil., Ph.D., M.I.I.E. — Biol. Div., Oak Ridge National Lab., P.O. Box Y, OAK RIDGE, Tenn., U.S.A.
— temporarily: Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands.
a. The pattern of macromolecular synthesis in embryonic induction. *Triturus pyrrhogaster (Urodela)* (in collaboration with T. YAMADA)
b. Morphogenetic effects of different RNA fractions of rat liver and their hydrolysates on the ectoderm. *(Urodela)*

BRAMBELL, F. W. R. B.A., Ph.D., D.Sc., F.R.S., M.I.I.E., Prof. — A.R.C. Unit. of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
a Immunological relations of mother and young. *(Mammalia)*

BRÄNDLE, K. A. Dr.rer.nat. — Zool. Inst. der Techn. Hochschule, Kaiser str. 2, 75 KARLSRUHE, Deutsche Bundesrepublik
a. Preparation of duplicitates anteriores and heads connected in series for research on modes of activity of the reduplicated brain and on behaviour. *(Amphibia)*
b. Development of wing pattern in transplanted wing anlage. *Plodia interpunctella (Lepidoptera)*

BRANDOM, W. F. A.B., M.A., Ph.D. — Dept. of Zool., Newcomb Coll., Tulane Univ., NEW ORLEANS 18, La., U.S.A.

BRAUCKMANN, Miss E. S. Dr. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289, TUCUMAN, Argentina.
a. Biochemistry and electron microscopy of neural tube closure. *Bufo arenarum (Anura), Gallus domesticus (Aves)*
b. Intergeneric cross fertilization; a descriptive study including caryology and some experimental essays upon polyspermy. *Bufo arenarum ♀ x Leptodactylus chaquensis ♂ (Anura)*

BREWIN, Miss B. I. M.Sc., D.Sc. — Dept. of Zool., Univ. of Otago, DUNEDIN, New Zealand

BRICK, I. B.S., M.S., Ph.D. — Dept. of Biol., Wash.Sq. Coll., New York Univ., NEW YORK 3, N.Y., U.S.A.
a. Tissue affinities in developing melanophores studied by time-lapse photography. *Siredon mexicanum (Urodela)*

BRIEGEL, H. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

BRIEGLEB, W. Dr.rer.nat. — DVL-Inst. f. Flugmedizin, Kölnerstr. 70, 532 BAD GODESBERG, Deutsche Bundesrepublik
a. Einfluss von Licht und hoher Temperatur auf die Ontogenese einer neotenen Art aus einem Höhlenbiotop. *Proteus anguinus (Proteidea, Urodela)*
b. The influence of simulated weightlessness on the development of microbionts and cell cultures.

BRIEN, P. L. Dr.Sci.Zool., M.I.I.E., Prof.Hon. — Inst. de Zool. Torley-Rousseau, Fac. des Sci., Univ. libre de Bruxelles, 50 Avenue F. D. Roosevelt, BRUXELLES, Belgique
a. Embryologie et sexualisation. *Hydra fusca, H. attenuata (Hydroidea)*
b. Embryologie; origine des cellules germinales. *(Styelidae, Tunicata)*
c. Embryologie. *Protopterus dolloï (Dipnoi)*

BRIGGS, R. W. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.
  a. Studies on nuclear differentiation in embryos. *Rana pipiens, Ambystoma mexicanum (Amphibia)*
  b. Studies on genetic maternal effects. *Ambystoma mexicanum (Urodela)*

BRINCK-JOHNSEN, T. Ph.D., M.Sc. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.
  a. Placental and fetal steroidogenesis. *Dasypus novemcinctus (Edentata)*

BRINSTER, R. L. V.M.D., Ph.D. — King Ranch Lab. of Reprod. Physiol., School of Veter. Med., Univ. of Pennsylvania, 25th and Locust Sts., PHILADELPHIA 4, Pa., U.S.A.
  a. Fertilization; physiology and biochemistry of ova and early cleavage stages. *(Mammalia)*

BRODE, W. E. B.S., M.A. — Gulf Coast Research Lab., OCEAN SPRINGS, Miss., U.S.A.

BRØNDSTED, H.V. Dr. Phil., M.I.I.E., Prof. (Emer.) — Stockholmsgade 23, COPENHAGEN, Denmark
  a. Physiology and regeneration. *(Turbellaria)*
  b. Embryology. *Mus musculus (Rodentia)*

BROOKBANK, J. W. B.A., M.S., Ph.D. — Dept. of Biol., Univ. of Florida, GAINESVILLE, Fla. U.S.A.

BROSEMER, R. W. Ph.D. — Dept. of Chem., Washington State Univ., PULLMAN, Wash., U.S.A.
  a. The morphological and enzymic development of flight muscle. *(Insecta)*

BROUWER, P. J. Med.Drs. — Anat.-Ambryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands

BROWN, D. D. M.D., M.S. (Biochem.) — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts, BALTIMORE 18, Md., U.S.A.
  a. Biochemical studies of early development. *Rana pipiens, Xenopus laevis (Anura)*

BROWN, J. W. A.B., M.A., Ph.D., Prof. — Dept. of Anat., Univ. of Alabama Med. Center, 1919 Seventh Avenue South, BIRMINGHAM, Ala. 35233, U.S.A.
  a. Development of the nucleus of the spinal tract of the trigeminal nerve. *Homo sapiens (Primates)*
  b. Development of the chief sensory nucleus of the trigeminal nerve. *Homo sapiens (Primates)*
  c. Embryonic development of the telencephalon. *Myotis lucifugus, M. velifer, Pipistrellus hesperus (Chiroptera)*

BRUMBAUGH, J. A. B.S. — Dept. of Genet., Iowa State Univ., AMES, Iowa, U.S.A.

BRUMMETT, Miss A. R. B.A., M.A., Ph.D. — Dept. of Biol., Oberlin Coll., OBERLIN, Ohio, U.S.A.
  a. Experimental analysis of morphogenetic movements and differentiation in the early gastrula by delation-explantation techniques. *Fundulus heteroclitus (Teleostei)*
  b. Analysis of biochemical differences in various presumptive regions of the early gastrula. *Fundulus heteroclitus (Teleostei)*

c. Factors influencing host-graft antagonisms in anterior shield grafts. *Fundulus heteroclitus (Teleostei)*

BRUN, J. L. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Adaptation aux températures élevées. *Caenorhabditis elegans (Nematoda)*

BRUNEL, Cl. Lic.ès Sci. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Métabolisme des nucléotides. *Bombyx mori (Lepidoptera)*

BRUNST, V. V. Dr.Biol. — Roswell Park Memorial Inst., 666 Elm St., BUFFALO 3, N.Y., U.S.A.

BRYAN, J. H. D. B.Sc., M.A., Ph.D. — Dept. of Zool. and Entomol., Coll. of Sci. & Humanities, 360 Science Building, Iowa State Univ., AMES, Iowa 50010, U.S.A.

a. Cytochemical studies of gamete formation. *Mus musculus (Rodentia)*

b. Nucleic acid-protein ratios during growth and differentiation. *Mus musculus (Rodentia)*

c. Development of nuclear staining suitable for electron microscopy.

d. Cytochemical studies of nuclear proteins (in differentiating and adult tissues). *Mus musculus (Rodentia)*

BUCHANAN, G. D. B.A., M.A., Ph.D. — Dept. of Anat., Med. Units, Fac. of Basic Med. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

BULMER, D. M.A., M.D. — Dept. of Anat., Univ. of Manchester, MANCHESTER 13, England

a. Cytochemistry of developing female genital tract. Various spp. *(Mammalia)*

b. Cytochemistry of placenta. *(Rodentia)*

BURDI, A .R. B.S., M.S., Ph.D. — Dept. of Anat., Med. School, Univ. of Michigan, 4500 East Med. Bldg., ANN ARBOR, Mich., U.S.A.

a. Quantitative growth analyses of the craniofacial, dental and palatopharyngeal regions of normal and abnormal embryos. *Homo sapiens (Primates)*

b. The development of biomechanic and architectural properties of the musculoskeletal system of the head before birth. *Homo sapiens (Primates)*

BURDON-JONES, C. B.Sc., Ph.D., M.I.I.E. — Marine Science Labs., Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales

a. Development and regeneration. *Rhabdopleura normani, Cephalodiscus* spec. and other spp. *(Pterobranchia, Hemichordata)*

BURGESS, Miss A. M. C. B.Sc. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Capacity of dedifferentiated cell nuclei to control embryonic development after transplantation into enucleated eggs. *Xenopus laevis (Anura)*

BURNS, R. K. A.B., Ph.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

BURT. A. — Dept. of Anat., Yale Univ. Sch. of Med., NEW HAVEN, Conn., U.S.A.

BUTLER, E. G. Ph.D., D.Sc., M.I.I.E., Prof. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J. 08540, U.S.A.

a. Study of the mechanics of the formation of the regeneration blastema; the influence of nerves on blastema formation; regression in nerveless non-regenerating limbs. *Ambystoma punctatum, A. opacum (Urodela)*
b. Effects of ultraviolet radiation on limb development and limb regeneration. *(Urodela)*
c. Problems of polarity in the limb; regeneration after reversal of the proximo-distal axis. *(Urodela)*
d. Study of epidermal hyperplasia. *(Urodela; Mammalia)*
e. Spinal cord regeneration. *(Urodela)*

BUTLER, H. M.A., M.D., B.Chir. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Saskatchewan, Canada
a. Reproductive cycle, implantation, placentation and early embryology. *Galago senegalensis senegalensis (Lemuroidea, Primates)*

BUTROS, J. M. M.A., PH.D., Prof. — Dept. of Biol., American Univ. of Beirut, BEIRUT, Lebanon
a. Differentiation in explanted fragments of early blastoderms. *Gallus domesticus (Aves)*
b. Promoting action of RNA from embryonic organs on differentiation of fragments of early blastoderms. *Gallus domesticus (Aves)*
c. Study of possible inductive action of nucleic acids (extracted from embryonic organs) on explants from young blastoderms. *Gallus domesticus (Aves)*

BUTSCHAK, G. Dr.rer.nat. — Inst. für experimentelle Krebsforschung, Deutsche Akademie der Wiss. zu Berlin, Lindenberger Weg 70, BERLINBUCH, D.D.R.
(no embryological work in progress)

BÜYÜKÖZER, Miss I. M.D., Prof. — Inst. of Histol. and Embryol., Med. Fac., Univ of Ankara, ANKARA, Turkey

BUZNIKOV, G. A. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

BYCZKOWSKA (SMYK), Mrs. W. Dr. — Dept. of Comp. Anat., ul. Krupnicza 50, KRAKóW, Poland
a. The developing liver as seen in the electron microscope. *Salmo trutta (Teleostei)*

CACERES, A. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement de l'épiphyse. *Homo sapiens (Primates)*

CAHN, Mrs. M. B. — Dept. of Pediatrics, Stanford Univ. School of Med., 300 Pasteur Drive, PALO ALTO, Calif., U.S.A.

CAHN, R. D. Dr. — Dept. of Pediatrics, Standford Univ. School of Med., 300 Pasteur Drive, PALO ALTO, Calif., U.S.A.

CAIRNS, J. M. A.B., M.S., Ph.D. — Biol. Station, Roswell Park Memorial Inst., SPRINGVILLE, N.Y., U.S.A.

CALAME, Miss S. M. Lic.ès Sci. — Lab. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

CAMBAR, R. Dr., M.I.I.E., Prof. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, TALENCE (Gironde), France
a. Etude descriptive et expérimentale de la morphogenèse du mésonéphros.

Rana spec., *Alytes* spec., *Discoglossus* spec., *Xenopus* spec. *(Anura)*
b. Etude expérimentale de la morphogenèse du tube digestif et des glandes annexes. *(Anura)*
c. Involution ou transformation de l'appareil excréteur pendant la métamorphose. *(Anura)*
d. Rapports entre l'appareil génital et l'appareil excréteur. (Anura)
e. Recherches descriptives sur le développement. *Gambusia* spec. *(Teleostei)*
f. Ultrastructure du pronéphros et du mésonéphros. *(Anura)*
g. Différenciation sexuelle. *(Anura)*
h. Ultrastructure des formations calcaires animales. *(Protozoa; Mollusca)*

CAMERON, I. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.

CAMEY, Miss T. B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, and Inst. Nac. de Endemias Rurais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil
a. General embryology. *Australorbis glabratus (Pulmonata, Gastropoda)*
b. Determination of DNA in the nuclei of blastomeres (Feulgen and cytophotometry). *(Pulmonata, Gastropoda)*

CAMOSSO, Miss M. E. Sc.Dr. — Inst. of human Anat., Fac. of Med., Policlinico, BARI, Italy
a. Analysis of the morphogenesis of the wing. *Gallus domesticus (Aves)*
b. Nerve patterns in experimentally duplicated limbs. *Gallus domesticus (Aves)*

CAMPBELL, J. C. B.Sc., Ph.D. — M.R.C. Epigenet. Research Group, Inst. of Anim. Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Antigenic studies of lens regeneration. *Xenopus laevis, Triturus alpestris (Amphibia)*
b. Regulatory mechanisms in lens regeneration. *Xenopus laevis (Anura)* (in collaboration with K. W. JONES)
c. Metabolism (immunochemistry) and regulatory mechanisms in lens development. *Xenopus laevis (Anura)* (in collaboration with D. E. S. TRUMAN)

CAMPENHOUT, E. van Dr., M.I.I.E., Prof. — Inst. d'Anat., Univ. de Louvain, 12 Rue des Récollets, LOUVAIN, Belgique
a. Development of the salivary glands. *(Vertebrata)*
b. Innervation of the genital tract during development. *(Vertebrata)*
c. Morphological observations on the innervation of the Fabricius pouch during development. *Gallus domesticus (Aves)*
d. Morphological studies on the development of the nervous system. *Crocodilus* sp. *(Reptilia)*

CANADY, M. R. — Sect. on Cell Biol., Ophthalmol. Branch, Natl.Inst. of Neurol. Diseases and Blindness, Natl.Insts. of Health, BETHESDA, Md.20014, U.S.A.

CANDIOLLO, L. — Ist. di Anat. umana, Fac. di Med., Corso Massimo d'Azeglio 52, TORINO, Italia
a. Fine structure of neuroblasts in embryos of different stages. *Gallus domesticus (Aves)*
b. Fine structure of myotomes in embryos of different stages. *Gallus domesticus (Aves)*

CANTELL, C.-E. Fil.mag. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
  a. Larval development. *(Heteronemertini)*

CANTINO, D. M.D. — Ist. di Istol. ed Embriol. Gener., Corso Massimo d'Azeglio 52, TORINO, Italia
  a. The development of Auerbach's and Meissner's plexus (silver staining, histochemistry, electron microscopy). *Oryctolagus cuniculus (Lagomorpha), Cavia cobaya, Rattus norvegicus (Rodentia)*

CAPANNA, E. Dott.Sci.Nat. — Ist. di Anat. comp. "G.B.Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia

CARINCI, P. Dott. — Inst. of Histol. and Gener. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italia
  a. Lipid metabolism of the embryonic liver.

CARLSON, B. M. B.A., M.S. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
  a. Effect of actinomycin D upon forelimb regeneration in the adult animal. *Triturus (= Notophtalmus) viridescens (Urodela)*
  b. Induction of supernumerary limbs in the adult animal by means of tissue implants subjected to various experimental alterations. *Triturus (= Notophthalmus) viridescens (Urodela)*
  c. Effects of various types of implanted tissues upon wound healing and regeneration in amputated forelimbs of the adult animal. *Rana pipiens (Anura)*

CASLER, Mrs. E. HIRSCHHORN B.S., M.A. — Dept. of Zool., Columbia Univ., 954 Schermerhorn Hall, NEW YORK, N.Y. 10027, U.S.A.
  a. The study of pigment patterns by means of nuclear transfers. *Rana pipiens (Anura)*
  b. Race hybrids obtained by nuclear transfers. *Rana pipiens* (*Anura*

CASPARI, E. W. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A.
  a. Influence of nucleic acid analogues on development. *Anagasta (=Ephestia) Kühniella (Lepidoptera)*

CASTELLANI (CERESA), Mrs. L. Dr. Biol.Sci. — Catt. di Embriol. e Morfol. sper., Univ. di Milano, Via Celoria 10, MILANO, Italia
  a. Study, with the electron microscope, of blood element maturation. *Triturus cristatus (Urodela)*

CASTIGLI (PITOTTI), Mrs. M. Dott., Prof. — Ist. di Zool., Fac. di Agraria, PERUGIA, Italia
  a. Natura della gastrulazione senza segmentazione. *Petromyzon fluviatilis (Cyclostomata)*
  b. Azione e reazione nella metamorfosi. *Bufo vulgaris (Anura)*
  c. Morfogenesi proteica.
  d. Rigenerazione e determinazione del sesso.

CASTON, J. D. A.B., M.A., Ph.D. — Developm. Biol. Center, Dept. of Anat., Western Reserve Univ. School of Med., 2127 Cornell Road, CLEVELAND, Ohio 44106, U.S.A.
  a. Nucleic acids and protein synthesis during development (ribosomes). *Rana pipiens, Xenopus laevis (Anura)*

† CATE, G. ten M.D., M.I.I.E., Prof. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands
(deceased)

CATHER, J. N. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
a. The differentiation of the shell gland. *Ilyanassa obsoleta* and other *Gastropoda* and *Pelecypoda (Mollusca)*
b. Experimental investigation of development. *Otocelis* spec. *(Convolutidae, Acoela, Turbellaria)*

CAUNA, N. D.Sc., M.D., Prof. — Dept. of Anat., School of Med., Univ. of Pittsburgh, PITTSBURGH 13, Pa., U.S.A.

CAZAUX, Cl. Dr.en Biol.Anim. — Inst. de Biol. Marine d'Arcachon, 2 Rue du Professeur Jolyet, ARCACHON, Gironde, France
a. Développement larvaire depuis l'oeuf jusqu'à la métamorphose et légèrement au delà (fécondation artificielle, récolte dans le plancton et les sédiments, et élevage au laboratoire). *(Polychaeta, Annelida)*

CHAKRAVARTY, A. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India
a. Induced changes. *(Hydroidea)* (in collaboration with S. MOOKERJEE, J. MITRA and S. BHATTACHERJEE)
b. Active principles in morphogenesis. (in collaboration with S. MOOKERJEE and Mrs. A. MOOKERJEE)

CHAIGNEAU, J. Lic.ès Sci. — Lab. de Zool. et Biol anim., Fac. des Sci., POITIERS, Vienne, France

CHALLICE, C. E. B.Sc., Ph.D., Prof. — Univ. of Alberta, CALGARY, Alberta, Canada
a. Electron microscopy of the heart in development. *Mus musculus (Rodentia)*, *Oryctolagus cuniculus (Lagomorpha)*

CHANG, C. Y. M.S., Ph.D., M.I.I.E. — Inst. of Zool., Acad. Sinica, Haitien, PEKING (53), China (via Hong-Kong)

CHAMBERLAIN, J. G. B.A., M.A., Ph.D. — Dept. of Anat., Univ. of California School of Med., SAN FRANCISCO 22, Calif., U.S.A.
a. Effects of vitamin deficiencies during pregnancy utilizing specific antimetabolites. *Rattus rattus (Rodentia)*
b. Pathogenesis of experimentally induced congenital hydrocephalus and cleft palate: 6-aminonicotinamide injected during pregnancy. *Rattus rattus (Rodentia)*

CHAMBOLLE, P. Dr. en Biol.anim. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, TALENCE (Gironde), France
a. Etude de la gestation. *Lebistes reticulatus (Poecilidae, Teleostei)*
b. Etude du développement in vitro. *Lebistes reticulatus (Poecilidae, Teleostei)*
c. Etude de l'ultrastructure des oeufs. *Lebistes reticulatus (Poecilidae, Teleostei)*

CHANDEBOIS, Miss R. Dr., Prof. — Lab. de Biol. Anim., C.P.E.M. 1 et 2, Fac. des Sci., Place Victor Hugo, MARSEILLE 3e, France
a. The origin of blastema material; Equilibrium between undifferentiated and differentiated cells, in relation to regeneration (tissue culture and X-irradiation). *Dugesia gonocephala, D. subtentaculat (Turbellria)*

CHANDLEY, Miss A. Ch. B.Sc., M.Sc. — Paterson Labs., Cytogenetics Dept., Christie Hosp. and Holt Radium Inst., Withington, MANCHESTER 20, England

a. Embryological development in embryos of translocation heterozygotes. *Mus musculus (Rodentia)*

CHANTURISHVILI, P. S. Doct.biol.sci., F.A.Z., Prof. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

a Comparative analysis of lens formation in normal development and during regeneration. *Pelodytes caucasicus (Anura)*

b. Comparative analysis of hypophysis formation under normal and experimental conditions. *Pelodytes caucasicus (Anura), Gallus gallus (Aves)*

CHARNIAUX (COTTON), Mrs. H. Dr.ès Sci., M.I.I.E. — Lab. de Génét. évolutive du C.N.R.S., CIF-sur-Yvette (S.et O.), France
— Lab. d'Evolution des Etres Organisés, 105 Boulevard Raspail, PARIS VIe, France

a. Contrôle hormonal de la différenciation sexuelle; la glande androgène. *(Malacostraca, Crustacea)*

b. Contrôle endocrine de l'hermaphrodisme proterandrique. *Pandalus borealis, Lysmata seticaudata (Decapoda natantia, Crustacea)*

c. Recherches sur l'autodifférenciation ovarienne. *(Malacostraca, Crustacea)* (en collaboration avec Mrs. J.BERREUR (Bonnenfant), et Miss M. C. MONTAUFIER)

d. Recherches sur la sécrétion d'hormone femelle par le testicule après inversion expérimentale en ovaire. *(Talitridae, Amphipoda, Crustacea)*

e. Recherches sur la nature chimique de l'hormone androgène. *(Crustacea)*

CHASE, H. B. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.

a. The mechanics of the slope of the fetal hair follicle. *Mus musculus (Rodentia)*

b. The embryology of anophthalmia (biochemistry of the optic vesicle stage). *Mus musculus (Rodentia)*

c. The embryology of "dominant waltzer". *Mus musculus (Rodentia)*

CHATTERJEE, S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India

a. Induced changes. *(Amoebina)* (in collaboration with S. MOOKERJEE)

b. Nucleo-cytoplasmic relations. *(Amoebina)*

CHAYTOR, D. E. B. B.Sc., Ph.D. — Dept. of Zool., Njala Univ. Coll., MANO, Sierra Leone, W. Africa

a. Control of growth in some embryonic organs. *Gallus domesticus (Aves)*

b. Sex determination in development. *Gallus domesticus (Aves)*

CHEN, P. S. Dr.Phil., M.I.I.E., Prof. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

CHENEY, R. H. B.Sc., A. M., S.M,. Sc.D., Sc.D. (Hon.), Prof. — Dept. of Biol., Brooklyn Coll., Bedford Ave. and Ave.H., BROOKLYN 10, N.Y, U.S.A.

a. Retardation effect of dimethylated xanthines on development. *Arbacia punctulata (Echinoidea)*

b. Theophylline, theobromine, and caffeine effects on fecundity and development. *Rattus norvegicus (Rodentia)*

c. Effect of di- and trimethylated xanthines on root tip growth. *Allium* spec. *(Liliaceae)*
d. Effect of methylated xanthines on the oxygen consumption of the fertilized egg and early embryology. *Arbacia punctulata (Echinoidea)*
e. Effect of x-ray and ultra-violet irradiation on development of methylated xanthine-treated eggs. *Arbacia punctulata (Echinoidea)*
f. Effect of caffeine on development. *Rana pipiens (Anura)*

CHENG, Th. C. A.B., M.S., Ph.D., Prof. — Dep. of Zool., Univ., of Hawaii, HONOLULU, Hawaii, U.S.A.
a. Morphogenesis, organogenesis and histochemistry of larval stages of digenetic forms. *Philopthalmus gralli, Fasciola gigantica (Trematoda*)
b. Developmental pathology in animals parasitized by larval trematodes and nematodes. *(Mollusca)*

CHEVREL, J.-P. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement du rein. *Homo sapiens (Primates)*

CHÈVREMONT, M. J. J. Prof., Membre corresp. de l'Acad.Roy. de Méd. de Belgique, Dr.hon.c. (Nancy) — Inst. d'Histol., Univ. de Liège, 20 Rue de Pitteurs. LIEGE, Belgique
a. Mécanisme de l'action antimitotique en culture de tissus.
b. Métabolisme et synthèse des ADN, sous l'effet d'antimitotiques.
c. Métabolisme et synthèse des protéines dans le noyau.
d. Structure cellulaire fine.
e. Processus de régénération.

CHIARODO, A. J. Ph.D. — Dept. of Biol., Georgetown Univ., WASHINGTON, D.C. 20007, U.S.A.
a. Neuroembryology (experimental morphology). *Sarcophaga bullata (Diptera)*

CHIBA, T. B.Vet., D.Med.Sci. — Res. Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan
a. Effects of some chemical substances upon the embryo. *Oryctolagus cuniculus (Rodentia)* (in collaboration with U. MURAKAMI)

CHIEFFI, G. M.D., Prof., M.I.I.E. — Ist. di Zool. e Anat. Comp., Fac. di Sci., Univ. degli Studi, Piazza F. Marchetti, CAMERINO, Italia
a. Sex differentiation and experimental sex reversal. *(Elasmobranchii; Amphibia; Aves)*
b. Sex hormone metabolism during development. *(Elasmobranchii; Amphibia)*
c. Histochemical and biochemical changes in the course of development. *(Pisces; Amphibia; Aves)*

CHINO, H. — Biol. Inst., Coll. of Gen. Education, Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan
a. Lipid transport and metamorphosis. *Bombyx mori (Lepidoptera)*

CHINOY, Miss N. J. M.Sc. — Dept. of Zool., M. S. Univ. of Baroda, BARODA 2, India
a. Fat metabolism of embryonic muscle cells cultured in vitro. *Columba livia, Gallus domesticus (Aves)*

CHITNIS, P. S. — Lab. of Cell Research, Dept. of Zool., N. Wadia Coll., POONA 1, India

a. A histochemical (qualitative and quantitative) study of the phosphatases in the larval stages. *Chrysomia megalocephala (Diptera)* (in collaboration with D. N. KAMAT, Kolhapur)

CHOUARD, C. H. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères. PARIS VIe, France

a. Noyaux du faisceau solitaire. *Homo sapiens (Primates)*

CHOWDHURY, J.R. — Chittaranjan National Cancer Research Centre, 37 S.P. Mookerjee Rd., CALCUTTA 26, India

CHRISTENSEN, N. O. — State Veter. Serum Lab., Bülowsvej 27, COPENHAGEN V, Denmark

a. Studies on pathological conditions in the testis, epididymis and accessory sex glands. *Bos taurus (Artiodactyla)* (in collaboration with E. BLOM)

CHUANG HSIAO HUI Dr.rer.nat., Dr.rer.nat.habil., M.I.I.E. — Lab. of Developm. Physiol., Inst. for Exper. Biol., Acad. Sinica, 320 Yo Yang Road, SHANGHAI, China

CHURCH, R. B. Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland

a. Biochemical studies of development. *Drosophila* spec. *(Diptera)*

CIGADA (LEONARDI), Mrs. M. Dott.Sci.Biol., M.I.I.E. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italia

a. Gametogenesis. *Amoeba* spec. *(Rhizopoda)*

ČIHAK, R. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia

a. Prenatal development of muscles. *Homo sapiens (Primates)*

CLAIRAMBAULT, P. Dr. de 3ème Cycle — Lab. d'Anat. Comp., Fac. des Sci., 7 Quai St. Bernard, PARIS Ve, France

a. Etude architectonique de l'encêphale au cours du développement; recherche des causes de la morphogénèse. *Discoglossus pictus, Rana pipiens (Anura), Pleurodeles waltlii (Urodela)*

CLARK, H. B.A., Ph.D., Prof. — The Graduate School, Univ. of Connecticut, Box U-133, STORRS, Conn. 06268, U.S.A.

CLAVERT, J. M. J. Dr. en Méd., Dr.ès Sci., M.I.I.E., Prof. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France

a. Recherches sur le déterminisme de la symétrie bilaterale. *(Pisces; Reptilia; Aves)*

b. Chimiotératogénèse (cortisone, antimitotiques). *(Aves; Mammalia)*

CLAXTON, J. H. B.Sc. — Dept. of Anat., Fac. of Rural Sci., Univ. of New England, ARMIDALE, N.S.W., Australia

a. Spatial patterns of microchaets on the abdominal tergites; biological control mechanisms (genetic techniques). *Drosophila melanogaster (Diptera)*

b. Spatial patterns of hair follicles; effects of mutant genes. *Mus musculus (Rodentia)*

CLAYTON (FREEDMAN), Mrs. R. M. B.A., M.A., M.I.I.E. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland

CLEGG, E. J. M.D., Ph.D. — Dept. of Human Biol. and Anat., Univ. of Sheffield, SHEFFIELD, England

a. Effect of hypoxia on somatic and reproductive growth. *(Mammalia)*

b. Growth patterns in the accessory reproductive organs. *(Mammalia)*

CLEMENT, A. C. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Emory Univ., ATLANTA 22, Ga., U.S.A.

a. Localization of morphogenic factors: experimental analysis. *Ilyanassa obsoleta (Gastropoda)*

b. Cytochemical and physiological studies of early development. *Ilyanassa obsoleta (Gastropoda)*

CLERMONT, Y. B.Sc., Ph.D., Prof. — Dept. of Anat., McGill Univ., MONTREAL, Quebec, Canada

a. Initiation of spermatogenesis. *Rattus norvegicus (Rodentia)* (in collaboration with Miss C. HUCKINS)

CLEWE, T. H. M.D. — Dept. of Obstetrics and Gynecol., Vanderbilt Univ. School of Med., NASHVILLE, Tenn. 37203, U.S.A.

a. Physiology of gamete and zygote transport in the female. *(Mammalia)*

CLULOW, F. — Dept. of Biol., Univ. of Ottawa, OTTAWA, Ontario, Canada

CLUTTER, Miss M. E. B.A., M.S., Ph.D. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a. Histodifferentiation in tissue cultures. *Nicotiana tabacum (Dicotyledoneae)*

b. Meiosis and spore differentiation. *Osmunda cinnamomea (Filicinae)*

COCK, A. G. M.A., Ph.D. — Dept. of Zool., Univ. of Southampton, SOUTHAMPTON, Hampshire, England

a. Developmental genetics of body shape and size. *(Crustacea; Insecta Heterometabola), Gallus gallus (Aves)*

COHEN, Ph. P. Ph.D., M.D., Prof. — Dept. of Physiol. Chem., Univ. of Wisconsin, Med.Scis.Bldg., MADISON, Wis. 53706, U.S.A.

a. Biochemical aspects of differentiation in liver during metamorphosis (enzyme changes and induction; RNA, DNA and histone changes; biochemical mechanism of thyroxine action as an inducer). *Rana catesbeiana (Anura)*

COHEN, S. Ph.D., M.I.I.E., Prof. — Dept. of Biochem., School of Med., Vanderbilt Univ., NASHVILLE 5, Tenn., U.S.A.

COHN, S. A. B.S., M.S., Ph.D. — Dept. of Anat., Med. Units, Fac. of Basic Med. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

COLLE (VANDEVELDE), Mrs. A. M.D. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium

a. Development of blood and blood-vessels. *Gobius niger, G. paganellus, Lepadogaster Candollii (Perciformes, Teleostei), Syngnathus typhle, Nerophis ophidion (Syngnathiformes, Teleostei)*

b. Development of pharynx. *Brachydanio rerio (Cypriniformes, Teleostei), Betta splendens (Perciformes, Teleostei)*

COLLIER, J. R. B.S., M.S., Ph.D., Prof — Dept. of Biol., Rensselaer Polytechnic Inst., TROY, N.Y. 12181, U.S.A.

a. Nucleic acid and protein synthesis of the embryo, with particular interest in the transcription and regulation of the genome during embryogenesis. 1) RNA and protein synthesis during early development. 2) The role of DNA-dependent RNA synthesis in embryogenesis. *Ilyanassa obsoleta (Gastropoda)*

COLLIN, J. P. Lic.es Sci., D.E.S. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France

a. Développement de l'épiphyse. *(Aves)*

COLLINI, Miss R. Dr. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italia
  a. Action of antimetabolites on embryonic development. *Gallus domesticus (Aves)*

COLOMBO, G. Dr.Biol.Sc., M.I.I.E., Prof. — Ist. di Istol. ed Embriol., Fac. di Sci., Univ. di Perugia, PERUGIA, Italia
  a. Gametogenesis. *(Arthropoda)*
  b. Development of the gonads. *(Insecta)*
  c. Biochemistry of embryogenesis. *(Insecta)*

COLOMBO, L. Dr.Biol.Sci. — Ist. di Zool., Anat. comp. e Genet., Fac. di Sci., Via Loredan 10, PADOVA, Italia
  a. Influence on gonad differentiation of sexual hormones injected into a hermaphroditic, proterandric animal during the male and the inversion phases. *Sparus auratus (Teleostei)*

COLWIN, A. L. Ph.D. , M.I.I.E., Prof. — Dept. of Biol., Queens Coll., Flushing 67, L.I., N.Y., U.S.A.
  a. Fertilization: sperm-egg association and zygote formation; cell contact and adhesion; fusion of plasma membranes; egg envelopes; lytic changes; cortical changes. Living material and electron microscope studies. *(Enteropneusta, Echinodermata, Annelida,* etc) (in collaboration with Mrs. L. H. COLWIN)

COLWIN, Mrs. L. HUNTER Ph.D., M.I.I.E., Prof. — Dept. of Biol., Queens Coll., FLUSHING 67, L.I., N.Y., U.S.A.
  a. Fertilization: sperm-egg association and zygote formation; cell contact and adhesion; fusion of plasma membranes; egg envelopes; lytic changes; cortical changes. Living material and electron microscope studies. *(Enteropneusta, Echinodermata, Annelida,* etc) (in collaboration with A. L. COLWIN)

CONRAD, G. W. B.S., M.S. — Dept. of Biol., Kline Biology Tower, Yale Univ., NEW HAVEN 11, Conn., U.S.A.
  a. Study of collagen and mucopolysaccharide synthesis in cells from the embryonic cornea in vitro. *Gallus domesticus (Aves)*
  b. Study of protein synthesis in isolated blastomeres. *Ilyanassa obsoleta (Gastropoda)*
  c. Mechanisms of cellular movement.

COON, H. G. Ph.D. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.
  a. Cloning of early and differentiated cells. Studies on the stability of characteristics of populations derived from single embryonic cells. *Gallus domesticus (Aves)*

CORLISS, C. E. B.S., M.S., Ph.D. — Dept. of Anat., Med. Units, Fac. of Basic Med. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn., U.S.A.

CORNER, G. W. A.B., M.D., D.Sc.,M.I.I.E., Prof. — Rockefeller Inst. for Med. Research, 66th St. and York Ave., NEW YORK, N.Y. 10021, U.S.A

CORNER, G W., Jr. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
  a. Anatomical and radiological studies of circulation in the maternal placenta. *Macaca mulatta, Homo sapiens (Primates)* (in colaboration with Miss E. M. RAMSEY and M. W. DONNER)

- b. Determinations of blood, amniotic and intervillous space pressures throughout pregnancy. *Macaca mulatta (Primates)* (in collaboration with Miss E. M. RAMSEY)

CORNER, M. A. Ph.D. — Netherlands Central Inst. for Brain Research, Ydijk 28, AMSTERDAM, Netherlands

- a. Development of central nervous system function (electrophysiological techniques). *(Aves)*
  1. Electroencephalogram and its relation to embryonic behavior.
  2. Effect on brain development of metabolic inhibitors.
  3. Neurological bases for the maturation of spontaneous and reflex patterns of movement.
  4. Development of susceptibility to "psychopharmacological" agents.

CORREIA MENDES, Mrs. M. J. M.D. — Inst. de Histol. e Embriol., Fac. de Med., Avenida Professor Egaz Moniz, LISBOA 4, Portugal

- a. Cytogenesis of the Golgi apparatus in ganglion cells of the embryo. *Gallus domesticus (Aves)*

CORSIN, Miss J. Lic.es Sci. — Lab. d'Anat. et d'Histol. comp., 7 Quai St. Bernard, PARIS Ve, France

- a. Développement du crâne osseux. *Pleurodeles waltlii (Urodela)*

COSTANZO, G. — Ist. Idrobiol. e Pescicoltura, Univ. di Messina, Via del Verdi 75, MESSINA, Italia

- a. Ovogenesi. *(Arthropoda; Mollusca; Echinodermata)*
- b. Ciclo biologico riproduttivo. *Mytilus galloprovincialis (Lamellibranchia)*
- c. Ultrastruttura dell'apparato nucleolare degli ovociti. *Patella coerulea (Prosobranchia, Gastropoda)*
- d. Presenza dell'ADN in alcune cellule dell'ovario. *Artemia salina (Anostraca)*

COSTELLO, D. P. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.

- a. Studies in experimental cytology. *Polychoerus* spec. *(Accela, Turbellaria), Chaetopterus pergamentaceus (Polychaeta)* (in collaboration with Miss C. HENLEY)
- b. Effects of antimitotic agents on eggs. *Chaetopterus pergamentaceus Polychaeta), Asterias forbesii (Asteroidea)* (in collaboration with Miss C. HENLEY)
- c. Studies on the centriole. *Polychoerus carmelensis (Acoela, Turbellaria)*

COSTLOW, J. D., Jr. A.B., Ph.D. — Duke Univ. Marine Lab., BEAUFORT, N.C. 28516, and Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.

- a. Location, development and interaction of endocrine systems in larvae, with special emphasis on systems controlling molting and metamorphosis. *Balanus eburenus (Cirripedia, Crustacea), Sesarma cinereum (Brachyura, Crustacea)*
- b. Effect of environmental factors on development, hatching, larval development and metamorphosis of animals maintained and reared under controlled laboratory conditions. *(Brachyura, Crustacea)*

COULOMBRE, A. J. B.S., M.S., Ph.D. — Sect. on Exper.Embryol., Lab. of Neuroanat. Sci., N.I.N.D.B., Natl. Inst. of Health, BETHESDA, Md. 20014, U.S.A.

a. Growth and morphogenesis of the eye. *Gallus domesticus (Aves)* (in collaboration with Mrs. J. L. COULOMBRE)
b. Pharmacology of the embryo. *Gallus domesticus (Aves)*
c. Histogenetic analysis of the nervous system using tritiated thymidine. *Gallus domesticus (Aves)*
d. Gametophyte morphogenesis. *Sphagnum recurvum*
e. Morphogenesis and cellular differentiation of the eye lens. *Gallus domesticus (Aves)* (in collaboration with G. W. PHILPOTT and J. L. COULOMBRE)
f. Histogenesis of the inner ear as revealed with tritiated thymidine. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

COULOMBRE (LACY), Mrs. J. L. B.S. — Sect.on Exper. Embryol., Lab. of Neuroanat. Sci., N.I.N.D.B., Natl.Inst. of Health, BETHESDA, Md. 20014, U.S.A.
a. Growth and morphogenesis of the eye. *Gallus domesticus (Aves)* (in collaboration with A. J. COULOMBRE)
b. Morphogenesis and cellular differentiation of the lens of the vertebrate eye. *Gallus domesticus (Aves)* in collaboration with A. J. COULOMBRE)
c. Regeneration of the neural retina. *Gallus domesticus (Aves)*

COULON, J. Lic.ès Sci. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France
a. Etudes thermogénétiques sur le développement embryonnaire. *Bombyx mori (Lepidoptera)*

COUNCE (NICKLAS), Mrs. S. J. B.A., M.A., Ph.D. — Dept. of Zool., Duke Univ., DURHAM, N.C., U.S.A.

CRACIUN, Mrs. O. L.Sc. — Catedra de Biol., Inst. Medico-Farmaceutic, Str. Pasteur 6, CLUJ, Rumania
a. Histochimie des organes embryonnaires cultivés in vitro. *Gallus* spec. *(Aves)*
b. Influence de l'hormone gonadotrope choriale sur la gonade indifferenciée cultivée in vitro. *Gallus* spec. *(Aves)*

CRAIG, D. A. B.Sc.(Hons) — Dept. of Zool., Univ. of Canterbury, CHRISTCHURCH, New Zealand
a. Descriptive embryology. *Neocurupira chiltoni (Nemtocera, Diptera)*

CRAIGMYLE, M. B. L. M.B., Ch.B., M.D. — Dept. of Anat., Univ. Coll. of South Wales and Monmouthshire, CARDIFF, Wales
a. Ultrastructural studies of the developing thymus, spleen, liver, studied from 12 day foetal through to adult animals. *Mus hybrida (Rodentia)*

CRANE, R. K. B.S., Ph.D. — Dept. of Biochem., Med.School, 710 S. Wolcott, CHICAGO 12 Ill., U.S.A.
a. Alterations of pyridine nucleotides in dividing marine embryos.
b. Sodium ion dependent active transport.
c. Membrane structure.

CRAWFORD, R. B. Ph.D., Prof. — Dept. of Microbiol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a. The relationship of the synthetic pathways of adenosine triphosphate to morphogenesis and differentiation. *Fundulus heteroclitus (Teleostei), Ambystoma maculatum (Urodela)*
b. The kinetics of RNA synthesis during early embryogenesis, studied

particularly in relation to energetics metabolism. *Fundulus heteroclitus (Teleostei), Ambystoma maculatum (Urodela)*

CRESP, J. Dr. — Lab. de Biol. Anim., C.P.E.M. 1 et 2, Fac. des Sci., Place Victor Hugo, MARSEILLE 3e, France
- a. Regeneration and asexual reproduction (histogenesis, X-irradiation). *Hydroides norvegica, Salmacina incrustans (Serpulidae, Polychaeta)*

CRIPPA, M. M.D. — Lab. di Radiobiol. anim., C.S.N. della Casaccia, ROMA, Italia
- a. Cell differentiation and developmental genetics.

CRISTEA, Miss M. M.D. — Catedra de Biol., Inst. Medico-Farmaceutic, Str. Pasteur 6, CLUJ, Rumania
- a. Histochimie des organes embryonnaires cultivés in vitro. *Gallus* spec. *(Aves)*
- b. Influence de l'hormone gonadotrope choriale sur la gonade indifferenciée cultivée in vitro. *Gallus* spec. *(Aves)*

CROISILE, Y. Lic.ès Sci.. Dr. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
- a. Culture d'organes embryonnaires sur des extraits homo- et hétérologues. *Gallus gallus (Aves)*
- b. Application de méthodes immunochimiques à l'étude de l'apparition des constituants spécifiques au cours du développement. *Gallus gallus (Aves)*
- c. Etude de quelques enzymes (hypoxanthine déshydrogénase, déshydrogénases lactiques) dans les organes de l'adulte et de l'embryon. *Gallus gallus (Aves)*

CRONE, M. — Finsen Lab., Finsen Inst., Strandboulevarden 49, COPENHAGEN, Denmark
- a. DNA synthesis in oocytes. *Mus musculus (Rodentia)* (in collaboration with Mrs. H. PETERS and E. LEVY)

CROWELL, P. S. A.B., A.M., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.

CRUZ, A. R. M.D., Ph.D. — Dept. de Morfol. Humana Funcional e Aplicada, Fac de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, SÃO PAULO, S.P., Brasil
- a. Histochemistry of developing neurons. *(Vertebrata)*
- b. Allometric growth of some organs. *Rattus rattus (Rodentia)*
- c. Nucleo-cytoplasmic allometric relation in oocyte. *(Vertebrata)*

CRUZ (DE LOSADA), Mrs. M. V. de la M.D. — Dept. de Embriol., Inst. Nac. de Cardiol., Ave. Cuauhtemoc nr. 300, MÉXICO 7, D.F., México
- a. The action of influenza virus (P-R8) upon cardiac development. *Gallus domesticus (Aves)*
- b. The effect of allantoic and amniotic fluid upon embryonic development. *Gallus domesticus (Aves)*
- c. The effect of variations of temperature upon embryonic development. *Gallus domesticus (Aves)*

CSABA, G. C.Sc.M., M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u. 58, Budapest IX, Hungary

a. Experimental and physiological embryology; teratogenesis. *Pleurodeles Waltlii, Ambystoma mexicanum (Urodela), Gallus domesticus (Aves), Rattus rattus (Rodentia)*

CSILLIK, B. M.D., Prof. — Dept. of Anat., Univ. Med. School, SZEGED, Hungary

a. Submicroscopical analysis of the development of post-synaptic membranes. *Mus rattus (Rodentia)* (in collaboration with G. KÁLMÁN)
b. Developmental histochemistry of the cerebellar cortex. *Cavia cobaya (Rodentia), Felis catus, Canis familiaris (Carnivora)* (in collaboration with P. KÁSA)
c. Developmental histochemistry of the archicerebellar cortex. *Mus rattus (Rodentia)* (in collaboration with F.JOÓ and P. KÁSA)
d. Developmental histochemistry of the vegetative ground plexus. *Mus rattus (Rodentia)* (in collaboration with G. B. KOELLE)

CUCCI, C. E. M.D. — Lenox Hill Hosp., 45 East 62nd St., NEW YORK 21, N.Y., U.S.A.

a. Developmental anomalies of trunco-conal septation. *Homo sapiens (Primates)*

CUMINGE, Miss D. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Etude en microscope electronique des associations de cellules cancéreuses et d'organes embryonnaires. *Gallus gallus (Aves)*

CURTIS, A. S. G. M.A., Ph.D. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Surface properties, movement and adhesion of embryonic cells. *(Amphibia; Aves; Mammalia)*
b. Dissociation and reaggregation of embryos. *(Amphibia; Aves)*
c. Cytoplasmic grafting. *(Amphibia)*
d. Origin and action of cortical properties. *(Amphibia)*

CURY, G. Agr.Phil., Lic.ès Sci. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

CUSIMANO (CAROLLO), Mrs. T. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Embryological research. *(Anura)*
b. Action of nucleosides and nucleotides on embryonic development. *(Ascidiae)*

CZAPSKA (DZIEKANOWSKA), Mrs. D. Ph.D. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland

a. Mitotic regulation. *Mus musculus albinus (Rodentia)*

CZIHAK, G. Dr.phil. — Max Planck Inst. für Meeresbiol., Abt. Bauer, Melanchtonstr. 36, 7400 TüBINGEN, Deutsche Bundesrepublik

a. Entwicklungsphysiologie. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*

CZOŁOWSKA, Miss R. K. M.Sc. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland

a. Histological and experimental studies on the origin of germinal "cytoplasm". *Xenopus laevis, Rana temporaria (Anura)*

DABAGIAN (ERAMICHEVA), Mrs. N. V. cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

a. Development and regeneration of the eye. *Rana esculenta, R. temporaria (Anura)*

DADOUNE, J. P. Dr. en Méd. — Lab. d'Histol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Analysis of histogenesis in the cerebellum. *Mus rattus (Rodentia)*

DAGG, C. P. Ph.D. — The Jackson Lab., BAR HARBOR, Me., U.S.A.

a. Environmental influences on embryonic development. *Mus musculus (Rodentia)*

b. Developmental genetics. *Mus musculus (Rodentia)*

DAHL, E. Prof. — Zootom. Dept., Zool. Inst., Univ. of Lund, LUND, Sweden

a. embryology. *(Amphipoda, Cephalocarida, Crustacea)*

DAIKOKU, S. M.D., Ph.D. — Anat. Dept., Med. School, Tokushima Univ., TOKUSHIMA, Japan

a. Experimental embryology of the endocrine organs. *Rattus rattus (Rodentia)*

b. Embryology of the motor and sensory nerve terminals. *Homo sapiens (Primates)*

DAILLIE, J. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Physiologie de la glande sérigène. *Bombyx mori (Lepidoptera)*

DALCQ, A. M. M.D., M.I.I.E., Prof. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Université, 97 Rue aux Laines, BRUXELLES, Belgique

DALTON, H. C. Ph.D., Prof. — Dept. of Biol., Univ. Coll., New York Univ., NEW YORK 53, Bronx, N.Y., U.S.A.

a. Uptake of tritiated dopa by melanoblasts in vitro. *Siredon mexicanum (Urodela)*

D'AMELIO, V. Ph.D., M.I.I.E. — Ist. di Anat. Comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia

a. Formation of hemoglobin. *Gallus* spec. *(Aves)*

b. Serological studies of subcellular components during liver differentiation. *Gallus* spec. *(Aves)*

c. Antigenic differentiation of red blood cell membrane. *Gallus* spec. *(Aves)*

DAMERON, Miss F. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

— Lab. d'embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. L'influence de la température sur la croissance et la différenciation d'organes embryonnaires cultivés in vitro. *Gallus gallus (Aves)*

b. Morphogénèse du poumon par les méthodes de dissociation et de réassociation en culture in vitro. *Gallus gallus (Aves)*

DAN, Mrs. J. C. Ph.D., M.I.I.E., — Embryol. Section, Dept. of Biol., Fac. of Sci., Ochanomizu Univ., Otsuka-machi, Bunkyo-ku, TOKYO, Japan

a. Electron microscopical observation of acrosome reaction. *(Mollusca; Echinodermata)*

b. Sperm entry. *(Nereidae, Polychaeta; Mollusca; Asteroidea, Echinodermata)*

c. Nature of vitelline coat of egg. *(Asteroidea, Echinodermata)*

DAN, K. Ph.D., M.I.I.E., Prof. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
a. Mechanism of cleavage. *Triturus* spec. *(Urodela)*
b. Protein SH in the ova. *(Echinoidea)*
c. Lunar periodicity of spawning. *Comanthus japonica (Crinoidea)*

D'ANCONA (LUNETTA), Mrs. G. Ph.D. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, PALERMO, Italia
a. Determinations of enzyme activities during development. *(Mollusca; Ascidiae)*

DANIEL, J. C., Jr. B.S., M.S., Ph.D. — Dept. of Biol., Univ. of Colorado. BOULDER, Colo., U.S.A.
a. Culture of embryos. *Oryctolagus cuniculus (Lagomorpha)*
b. Regeneration of embryos. *Oryctolagus cuniculus (Lagomorpha)*
c. Developmental physiology (embryonic nutrition, delayed implantation and effects of steroids on early development). *Oryctolagus cuniculus (Lagomorpha)*

DANIELI, G. A. Dr.Biol.Sci. — Ist di Zool., Anat. comp. e Genet., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. Developmental genetics; studies on differentiation of embryonic myoblasts in tissue culture. *Gallus gallus (Aves)*
b. Cell metabolism and multiplication in vitro.

DANKMEIJER, J. Med.Dr., M.I.I.E., Prof. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands

D'ANNA, T. Ph.D. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Radioautographic investigations in embryonic development. *(Ascidiae)*
b. Microrespirometric investigation in embryonic development. *(Ascidiae)*
c. Enzyme activity (ATP-ase) in embryonic development. *(Ascidiae)*

DANNEEL, R. Dr., Prof. — Zool. Inst. der Univ., Poppelsdorfer Schlosz, BONN, Deutsche Bundesrepublik

DASGUPTA, B. M.Sc., Ph.D., Prof. — Zool. Dept., Darjeeling Government Coll., DARJEELING, W. Bengal, India

D'AUBREY, Miss J. D. B.Sc. — Oceanographic Research inst., P.O. Box 736, DURBAN, Republic of South Africa
a. General embryology. *(Carcharhinidae, Selachii)*

DAVENPORT, R. Ph.D. — Dept. of Zool., Univ. of Illinois, URBANA, Ill., U.S.A.

DAVID (BöGLI), Mrs. D. Lic.es Sci. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France
a. Etude du développement de la glande mammaire (étude en culture in vitro; étude expérimentale). *Oryctolagus cuniculus (Lagomorpha)*

DAVID, G. Dr. en Méd. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Facteurs Rhesus. *Homo sapiens (Primates)*
b. Incomptabilités foeto-maternelles. *Oryctolagus cuniculus, Rattus* spec. *(Mammalia)*

DAVID, G. B. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J. 08540, U.S.A.
a. Mechanisms of cellular motility in fibroblasts, myoblasts and cells of nervous origin.
b. Studies of enzyme localization in living tissue cells.

DAVIDSON, E. H. B.A., Ph.D. — Rockefeller Inst. for Med. Research, 66th St. and York Ave., NEW YORK, N.Y. 10021, U.S.A.
a. Study of gene activity in oogenesis, the species and function of nucleic acids produced in lampbrush stage oocytes. *Xenopus laevis (Anura)*
b. Study of the molecular basis of cytoplasmic prelocalization. *Ilyanassa obsoleta (Gastropoda)*

DAVIES, D. H. M.Sc., Ph.D., Prof. — Oceanographic Research Inst., P.O. Box 736, DURBAN, Republic of South Africa
a. General embryology. *(Carcharinidae, Selachii)*

DAVIES, D.V. M.A., D.Sc., F.R.C.S., Prof. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E.1, England
a. Joints. *(Mammalia)*
b. Placentation. *(Vertebrata)*

DAVIS, Ch. C. Ph.D., Prof. — Developm. Biol. Center, Dept. of Biol., Western Reserve Univ., 2127 Cornell Road. CLEVELAND 6, Ohio, U.S.A.

DAVIS, Miss C. W. C. B.Sc. — Zool. Building, School of Biol. Scis., Univ. of Sydney, SYDNEY, N.S.W., Australia
a. Descriptive and experimental embryology. *Culex fatigans (Nematocera, Diptera), Lucilia cuprina (Cyclorrhapha, Diptera)*

DAVIS, G. F. R. B.Sc., M.Sc., Ph.D. — Research Station, Research Branch, Canada Agriculture, University Sub Post Office, SASKATOON, Sask., Canada
a. The quantitative and qualitative requirements of immature stages for amino acids and the intermediary metabolism of these amino acids. *Oryzaephilus surinamensis (Silvanidae, Coleoptera), Melanoplus sanguinipes (Acrididae, Orthoptera), Ctenicera destructor (Elateridae, Coleoptera)*
b. The effects of anti-metabolites on development and morphology. *Oryzaephilus surinamensis (Silvanidae, Coleoptera), Melanoplus sanguinipes (Acrididae, Orthoptera), Ctenicera destructor (Elateridae, Coleoptera)*

DAWID, I. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE Md. 21210, U.S.A.
a. Deoxyribonucleic acid synthesis during early development. *Rana pipiens, Xenopus laevis (Anura)*

DE, A. M.Sc. — Dept. of Zool., Presidency Coll., College St., CALCUTTA 12, India

DEAN, D. Ph.D. — Marine Research Laboratory, Univ. of Connecticut, NOANK, Conn. U.S.A.
a. Descriptive morphology of larvae. *Streblospio benedicti, Boccardia uncata, Sabellaria vulgaris (Sedentaria, Polychaeta), Harmothoë extenuata (Errantia, Polychaeta)*

DEARDEN, M. B.Sc. — Stretford Technical Coll., Talbot Rd., Stretford, MANCHESTER, England
— Depts. of Botany and Zool. (Genet. Lab.), Univ., MANCHESTER 13, England
a. Development of the cephalic complex in larva and pupa (microscopical examination, effects of dietary and other external influences, pharmacological effects, tissue culture). *Drosophila melanogaster (Diptera)*

DE BEER, Sir G. R. M.I.I.E., Prof. — 39 Shrewsbury House, Cheyne Walk, LONDON S.W.3, England
(no embryological work in progress)

DECK, J. D. B.S., M.A., Ph.D., Prof. — Dept. of Anat., School of Med.. Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.
- a. Effects on limb regeneration from infusing microquantities of substances antagonistic to the production of histamine. *Diemictylus viridescens (Urodela)*
- b. Elicitation of limb regeneration by means of microquantities of tissue extracts. *Diemictylus viridescens (Urodela)*

DECROLY, Mrs. M. Dr. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
- a. Métabolisme des acides nucléiques au cours du développement embryonnaire. *Xenopus laevis (Anura)*
- b. Etude des ribosomes au cours du développement. *Xenopus laevis (Anura)*

DE FEO, V. J. B.S., M.S., Ph.D., Prof. — Dept. of Obstetrics and Gynecol., Vanderbilt Univ. School of Med., NASHVILLE, Tenn. 37203, U.S.A.
- a. Embryo-maternal relationships.
  - 1. Hormonal control of uterine sensitivity, histochemistry and electron microscopy. *Rattus rattus (Rodentia)*
  - 2. Pregnancy maintenance. *Rattus rattus (Rodentia)*
  - 3. Interspecies ovum transfers. *Rattus rattus, Mesocricetus auratus (Rodentia)*

DEGENHARDT, K.-H. Dr.med., Prof. — Inst. f. Humangenetik und vergl. Erbpathol. der Univ., FRANKFURT/Main 6, Deutsche Bundesrepublik
- a. Descriptive embryology. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora), Mesocricetus auratus, Cricetulus* spec. *(Rodentia)*
- b. Experimental embryology. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora), Mesocricetus auratus, Cricetulus* spec. *(Rodentia)*
- c. Developmental genetics. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora)*
- d. Developmental pathology. *Oryctolagus cuniculus (Lagomorpha), Mustela erminea (Carnivora), Mus musculus, Mesocricetus auratus, Cricetulus* spec. *(Rodentia)*
- e. Influence of 2-desoxy-5-fluorcytidin on pattern formation in early primordia of different inbred strains. *Mus musculus (Rodentia)*
- f. Influence of X-irradiation (dosages: 130 r, 65 r, 30 r, 15 r, 7 r) on pattern formation in early primordia of stage VII days + 6 h of embryonic development. *Mus musculus (Rodentia)*

DEGLI ESPOSTI, Miss A. M. Dr. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia
- a. The role of the thymus in respiration during metamorphosis. *Bufo bufo (Anura)*

DeHAAN, R. L. M.A., Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
— **Dept. of Biol.,** Johns Hopkins Univ., Charles and 34th Sts, BALTIMORE 18, Md., U.S.A.
a. Morphogenetic movements and cell migration associated with embryonic heart formation. *Gallus gallus (Aves)*
b. Pacemaker formation and the initiation of the heartbeat. *Gallus gallus (Aves)*
c. Spatial organization and supracellular patterns in embryonic tissues. *Drosophila* spec. *(Diptera), Gallus gallus (Aves)*

DEKKER, Miss A. Med.Dr. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands

DELMAS, A. Prof. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement de l'encéphale. *Homo sapiens (Primates)*
b. Développement anormal de l'encéphale et des organes des sens. *Mus rattus (Rodentia)*

DeLONG, G. R. A.B., M.D. — Sect. on Exper.Embryol., Lab. of Neuroanat. Sci., N.I.N.D.B., Natl.Inst. of Health, BETHESDA, Md. 20014, U.S.A.
a. Development of retino-tectal maps. *Gallus domesticus (Aves)*

DELSOL, M. Dr.ès Sci., Prof. — Dépt. de Biol. Génér., Fac. Cathol., 25 Rue du Plat, LYON 2è, France

DÉLYE (ROLLIN), Mrs. P. M. Lic.es Sci. — Lab. de Biol. Anim., Fac. des Sci., 1 Place Victor Hugo, MARSEILLE 3e, France
a. Experimental analysis of development; regeneration; stolonisation. *(Syllidae. Polychaeta)*

DeMAGGIO, A. E. B.S., M.A., A.M., Ph.D. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H., U.S.A.
a Experimental developmental morphology *(Plantae)*

DE MEIO, R. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

DENIS, H. A. Dr.ès Sci. — Dépt. Morphol., Inst. de Zool. Ed. Van Beneden, Fac. des Sci., 22 Quai Ed. Van Beneden, LIÈGE, Belgique
a. Etude du rôle des acides nucléiques dans la différenciation embryonnaire. *(Amphibia)*

DENNE, M. P. B.Sc. (Hons.), Ph.D. — Plant Physiol. Div., Dept. of Scientific and Industrial Research, PALMERSTON NORTH, New Zealand
a. Changes in the rate and distribution of cell division in the shoot apex, including diurnal fluctuations, plastochronal changes, and the transition from the vegetative to the flowering apex. *Trifolium repens*

DENNY, P. C. B.A. — Dept. of Devel. Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif., U.S.A.
a. Enzyme induction and protein synthesis in marine embryos. *(Echinodermata)*

DENT, J. N. A.B., Ph.D., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va., U.S.A.

a. Metamorphic physiology and morphology of a trogloditic form. *(Urodela)*
b. Radiation-protective effects of implanted embryonic cells. *Triturus viridescens (Urodela)*

DEOL, M. S. B.Sc., M.Sc., Ph.D. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. Developmental genetics of skeletal mutants. *Mus musculus (Rodentia)*
b. Developmental genetics of mutants with defects of the inner ear. *Mus musculus (Rodentia)*
c. Developmental genetics of neurological mutants. *Mus musculus (Rodentia)*

DEPARIS, P. Lic.ès Sci. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE, France
a. Hématopoièse. *(Urodela)*

DÉPÊCHE, J. — Lab. d'Evolution des Etres Organisés, Fac. des Sci., 105 Boulevard Raspail, PARIS VIe, France
a. Physiological investigations on embryos developing in vitro. *Poecilia reticulata (=Lebistes reticulatus), Xiphophorus helleri, Gambusia affinis, Heterandria formosa (Poeciliidae, Teleostei)*

DEROM, R. M. J. M.D., Ph.D. — Dept. of Obstetr. and Gynecol., Univ. Hosp., De Pintelaan, GENT, Belgium
a. Anaerobic metabolism in the fetus (determination of blood lactate and pyruvate; calculation of "excess lactate"). *Homo sapiens (Primates)*
b. Longitudinal study of uniovular twins (determination of genotype based on structure of placental membranes and on differences in blood groups; followup on a long term basis). *Homo sapiens (Primates)*

DESSOUKY, D. A. M.D., Ph.D. — Dept. of Anat., Schools of Med. and Dent., Georgetown Univ., 3900 Reservoir Road, N.W., WASHINGTON, D.C. 20007, U.S.A.
a. Development and differentiation of skeletal muscle, electron microscopy. *Gallus domesticus (Aves)*
b. Development of motor-end plate and relation to differentiation of the skeletal muscle. *Gallus domesticus (Aves)*

DE TERRA (WHITTAKER), Mrs. N. B.A., Ph.D. — Lab. of Nuclear Med. and Radiation Biol., U.C.L.A., 900 Veteran Ave., LOS ANGELES, Calif. 90024, U.S.A.
a. Morphogenesis and nucleo-cytoplasmic interactions studied by microsurgery, histochemistry and autoradiography. *Stentor coeruleus (Ciliata)*

DETH, J. H. M. G. van M.D., Prof. — Dept. of Anat. and Histol., Univ. of Adelaide, ADELAIDE, S. Austr., Australia
a. Teratogenesis by hormones. *Gallus domesticus (Aves)*
b. Hormonal influences on sex determination. *Gallus domesticus (Aves)*

DETTLAFF, Mrs. T. A. Dr.Biol.Sci., M.I.I.E., Prof. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R, Vavilov St 12, MOSCOW V-133, U.S.S.R.
a. The nature of the specificity of oocyte nuclei in the process of oocyte maturation. *(Amphibia)* (in collaboration with Mrs. L. A. NIKITINA)
b. Effect of gonadotropins and changes in the germinal vesicle and in the oocyte cytoplasm during maturation (effect of actinomycin, olygomycin and puromycin). *(Amphibia)*

c. Time regularities of the maturation process; temperature effect upon maturation processes in vivo and in vitro. *(Acipenseridae, Chondrostei)* (in collaboration with S. G. VASSETZKY and DAVIDOVA)
d. Cell division: duration, mechanism, relation to the process of differentiation. *(Amphibia), (Acipenseridae, Chondrostei)*

DEUCHAR, Miss E. M. M.A., Ph.D., M.I.I.E. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. Cellular uptake of amino-acids into proteins studied autoradiographically *Xenopus laevis (Anura), Gallus domesticus (Aves)*
b. Effects of amino-acid analogues on development of embryonic tissues. *Gallus domesticus (Aves)* (in collaboration with Miss A. M. L. DRYLAND)
c. Changes in types of RNA in different developing tissues and in the nucleotide base composition. *Xenopus laevis (Anura)* (in collaboration with M. J. EVANS)

DEVILLERS, Ch. M.I.I.E., Prof. — Lab. d'Anat. et d'Histol. comp., Quai 7 St. Bernard, PARIS Ve, France
a. Origine de l'énergie utilisée au cours du développement de l'oeuf. *Salmo fario, S. irideus (Teleostei)*
b. Recherches sur les mouvements cellulaires au cours de la gastrulation. *Rana pipiens (Amphibia)*
c. Respiration de l'oeuf. *Salmo irideus, Brachydanio rerio (Teleostei)*

DEVIS, Miss R. J. M.Sc. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, Republic of South Africa
a. An electronmicroscopic study of development. *(Ascidiae)*
b. An electron microscopic study of differentiating ectoderm. *Rana angolensis (Anura)*

Di BERARDINO, Miss M. A. B.S., Ph.D., M.I.I.E. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A.
a. Investigations of germ plasm in relation to nuclear transplantation. *Rana pipiens (Anura)*
b. Establishment of karyotype and an investigation into its stability during embryonic differentiation. *Rana pipiens (Anura)*
c. Chromosome studies of renal adenocarcinoma. *Rana pipiens (Anura)*
d. The role of tumor nuclei and nuclei of normal cells in nuclear differentiation. *Rana pipiens (Anura)*

DICENTA BALLESTER, C. Dipl.Med. — Lab. d'Embryol. expér., Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue de l'Ecole de Médecine, GENÈVE, Suisse
a. Regulative capacity of the embryonic axis after various kinds of reversal experiments of the Hensen's node. *Gallus domesticus (Aves)*

DICK, D. A. T. M.B., Ch.B., M.A., D.Phil. — Dept. of Human Anat., Univ. Museum, South Parks Road, OXFORD, England
a. Study of ion fluxes in oocytes. *Bufo bufo (Anura)* (in collaboration with D. J. FRY)

DICKSON, A. D. M.A., M.D. — Dept. of Anat., Dalhousie Univ., HALIFAX, Nova Scotia, Canada
a. Effect of ovarian hormones upon pre-implantation development. *Mus musculus (Rodentia)*

DIDIER (MARTIN), Mrs. E. Lic.es Sci. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France
- a. Morphogenèse de la glande coquillière (cultures in vitro; étude expérimentale). *Gallus domesticus (Aves)*

DIETERLEN (LIÈVRE), Mrs. F. Dr.ès Sci. — Inst. d'Embryol. et Tératol. expér., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
- a. In vitro development of the pancreas; its influence on liver glycogen in associated cultures. *Gallus gallus (Aves)*
- b. Formation de glycogène dans des cultures organotypiques de foie embryonnaire. *Gallus gallus (Aves)*
- c. Ultrastructure of the embryonic pancreas. *Gallus gallus (Aves)*

DIMITROVA, Miss A. D.Sc., Prof. — Inst. of Gener. Biol., Higher Med. School, Blwd. Lenin N.2, SOFIA 13, Bulgaria

DIMOND, Sister M. T. A.B., M.S., Ph.D. — Dept. of Biol., Trinity Coll., WASHINGTON, D.C. 20017, U.S.A.
- a. Histogenesis and interrelations of endocrines: the hypophysis under normal conditions and after treatment with goitrogens; the developmental sequence of organic iodine compounds in the thyroid. *Chelydra serpentina serp.* and other spp. *(Chelonia)*

DINGLER (HAHL), Mrs. E. Ch. Dr.med., Prof. — Anat. Inst. der Univ., Pettenkoferstr. 11, MÜNCHEN 15, Deutsche Bundesrepublik

DOBKIN, Sh. B.S., M.S., Ph.D. — Florida Atlantic Univ., BOCA RATON, Fla., U.S.A.
- a. The early larval stages. *Glyphocrangon spinicauda (Decapoda, Crustacea)*
- b. Larval development. *Thor* spec. *(Decapoda, Crustacea)*

DOBROKHOTOV, V. N. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.

DOBRZAŃSKA (KACZANOWSKA), Mrs. J. Dr. — Inst. of Zool., Warsaw Univ., WARSZAWA 64, Poland
- a. Experimental research on reconstruction of removed parts in relation to growth and cell division. *Chilodonella cucullulus (Ciliata)*
- b. Pattern of morphogenesis in budding. *Heliodrona Schenteni (Chonotricha, Ciliata)*

DOERR (SCHOTT), Mrs. J. Dr.ès Sci. — Lab. de Zool. et d'Embryol. expér., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France
- a. Analyse de l'entrée en jeu des corrélations hypothalamo-pituitaires par la méthode de greffes hypophysaires. *Rana temporaria, Triturus cristatus, T. marmoratus (Amphibia)*
- b. Cytologie et ultrastructure de l'hypophyse aux diverses phases de leur évolution. *(Amphibia)*
- c. Etude du comportement des greffes hypophysaires. *(Amphibia)*

DOKOW, V. K. M.D., Prof. — Inst. of Biol. and Pathol. for fertilization of domestic animals, Bul. Lenin 55, SOFIA, Bulgaria

DOLLANDER, A. M.I.I.E., Prof. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

DOMAC (TEŠAR), Mrs. B. M.D., Sc.M.D. — Inst. of Histol. and Embryol., Fac. of Med., ZAGREB, Salata, Yugoslavia

DOMURAT, J. D.Sc. — Dept. of Physiol. of Fishes, Agricultural Coll. OLSZTYN, Poland

a. Development of eggs in waterfree medium (paraffin oil). *Salmo trutta, S. gairdneri (Teleostei)*

b. The properties of perivitelline fluid of eggs developing in waterfree medium. *Salmo trutta, S. gairdneri (Teleostei)*

DONALDSON, J. C. Ph.B., M.D., Prof. (Emer.) — Dept. of Anat., School of Med., Univ. of Pittsburgh, 868B Scaite Hall, PITTSBURGH 13, Pa., U.S.A.

DONATO, Mrs. A. — Ist. di Zool. e di Anat. Comp., Univ. di Messina, MESSINA, Italia

a. Ricerche sull'ovogenesi: struttura, ultrastruttura, citochimismo del nucleolo e dei globuli vitellini. *Chiton olivaceus (Amphineura, Mollusca)*

b. Indagini sugli ovociti in accrescimento. *Arbacia lixula, Sphaerechinus granularis (Echinoidea)*

DONNER, M. W. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

a. Anatomical and radiological studies of circulation in the maternal placenta. *Macaca mulatta, Homo sapiens (Primates)* (in collaboration with Miss E. M. RAMSEY and G. W. CORNER, Jr.)

DOORENMAALEN, W. J. van M.D., M.I.I.E. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands

a. Separation, identification and histological localisation of the lens proteins in lens development. *Gallus domesticus (Aves)*

b. Genesis of symmelia and sympodia.

DOSKOČIL, M. MUDr., C.Sc. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia

a. Disturbances of bone growth after poliomyelitis. *Gallus domesticus (Aves), Homo sapiens (Primates)*

DOSSEL, W. E. B.S., M.S., Ph.D., Prof. — Electron Microscope Lab., Dept. of Anat., Creighton Univ. School of Med., 14th and Davenport Sts., OMAHA 2, Neb., U.S.A.

a. The fine structure of endocrine organs of normal and hypophysectomized embryos. *Gallus domesticus (Aves)*

b. The fine structure of embryonic organs (descriptive). *Gallus domesticus (Aves)*

c. Studies on development of function and fine structure of mesonephric and metanephric kidneys, liver and pancreas. *Gallus domesticus (Aves)*

DRACHMAN, D. B. A.B., M.D. — New England Center Hosp., Tufts Univ. School of Med., 171 Harrison Ave., BOSTON, Mass., U.S.A.

a. Development of joints, and joint malformations. *Gallus domesticus (Aves)*

b. Development of motor end plates (neuromuscular junctions). *Gallus domesticus (Aves)*

c. Developmental neuropharmacology (transmitter substances). *Gallus domesticus (Aves)*

d. Trophic influence of motor neurons in developing muscle. *Gallus domesticus (Aves)*

DRAGOMIROV, N. I. Dr.biol.sci., M.I.I.E., Prof. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. The development of the lateral sensory system. *Acipenser ruthenus (Chondrostei)*

DREYER, Miss M. V. M.Sc. — Dept. of Zool., Univ. of O.F.S., BLOEMFONTEIN, Republic of South Africa

DRUKKER, J. — Anat. Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands

a. Descriptive and experimental studies of the developing central nervous system. *Gallus domesticus (Aves)*

DRYLAND, Miss A. M. L. B.Sc., Ph.D. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Effects of amino-acid analogues on development of embryonic tissues. *Gallus domesticus (Aves)* (in collaboration with Miss E. M. DEUCHAR)

DUBEY, P. N. M.B.B.S., M.S., Prof. — Dept. of Anat., Med. Coll., NAGPUR 3, Maharashtra State, India

a. Peripheral nucleus (Hofmann's nucleus major) of the spinal cord. *Gallus domesticus (Aves)*
   1. Influence of periphery (limb) on its morphogenesis.
   2. Cytoarchitecture.

b. Differentiation of unipolar cells of spinal ganglion in tissue culture. *Gallus domesticus (Aves)*

DUBOIS, R. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne, Seine, France

a. Recherches sur la lignée germinale. *Gallus gallus (Aves)*

DUFAURE, J. P. Lic.ès Sci. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France

a. Développement embryonnaire. *Lacerta (= Zootoea) vivipara (Lacertilia)*

b. Recherches descriptives et expérimentales sur la morphogenèse de l'appareil uro-génital. *Lacerta (= Zootoea) vivipara (Lacertilia)*

DUFFEY, L. M. B.S. ,M.S., Ph.D., Prof. — Dept. of Zool., Univ. of S. Dakota, VERMILLION, S.Dakota, U.S.A.

DUKE, K. L. A.B., Ph.D. — Dept. of Anat., Med. Center, Duke Univ., DURHAM, N.C., U.S.A.

a. Comparative histology of the ovary (including developmental stages and history of germ cells). *Cynocephalus* spec., *Manis* spec., *Nycticebus* spec., *Presbytis* spec., *Pteropus* spec., *Tupaia* spec., *Urogale* spec. *(Mammalia)*

DUMAS, Miss Th. Lic. en Sci. — Inst. d'Embryol. et Tératol. expér., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Etude de l'action des rayons X sur la croissance en culture organotypique, d'une tumeur cancéreuse. *Homo sapiens (Primates)*

DUNCAN, J. T. A.B., Ph.D. — Dept. of Biol., San Francisco State College, SAN FRANCISCO, Calif. 94132, U.S.A.

a. A study of the differentiation of melanophores in the skin under the stimulation of melanin debris, various extracts of melanin material, and certain amino acids and other small molecular weight substances (whole larvae and organ cultures of larval skin). *Taricha torosa (Urodela)*
b. A study of the spreading of melanophores into the flank skin of white animals following the rejection of grafted skin from black animals. *Siredon (= Ambystoma) mexicanum (Urodela)*

DUPRAT (ESCUDIÉ), Mrs. A.-M. Lic.ès Sci. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE, France
a. Culture in vitro de cellules embryonnaires diploïdes et hétéroploïdes. *(Amphibia)*
b. Etude autoradiographique du métabolisme des germes hétéroploïdes létaux. *Pleurodeles waltlii (Urodela)* (en collaboration avec J. C. BEETSCHEN)

DURANTE, Miss M. C. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Cholinesterase, dipeptidase and other enzymes in embryonic development. *(Ascidiae; Pisces)*

DUSPIVA, F. Dr., Prof. — Zool. Inst. der Univ., Physiol. Lehrstuhl, Berlinerstr., HEIDELBERG, Deutsche Bundesrepublik
a. Localization of enzymes within the embryo and in subcellular fractions. *(Insecta; Amphibia)*
b. Protein differentiation, ontogeny of enzyme patterns. *(Insecta; Amphibia)*
c. Energy metabolism and metabolism of nucleic acids, nucleotides, cofactors during development. *(Teleostei; Amphibia)*
d. Cell-physiological mechanisms of malformation in early development. *(Amphibia)*

DUTRIEU, Miss J. Dr.ès Sci. — Lab. de Physiol. génér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France
a. Métabolisme des glucides (tréhalose) au cours du développement. *Artemia salina, Lepidurus apus (Anostraca, Crustacea), Calliphora erythrocephala (Diptera), Bombyx mori (Lepidoptera)*

† DUYVENÉ DE WIT, J. J. Dr. Phil. Nat., Prof. — Dept. of Zool., Univ. of O.F.S., BLOEMFONTEIN, Republic of South Africa
(deceased)

DZIALLAS, P. R. Dr.med., Prof. — Anat. Inst. der Univ., Pettenkoferstr. 11, MÜNCHEN 15, Deutsche Bundesrepublik

EAKIN, R. M. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Calif., U.S.A.
a. Determination of neural plate, sucker and hypophysis. *Hyla regilla (Anura)*
b. Electron microscopy of induction systems. *Hyla regilla (Anura)*
c. Development of photoreceptors. *Peripatus* spec. *(Onychophora), (Gastropoda),* (and other *Invertebrata)*

EAYRS, J. T. B.Sc., Ph.D., D.Sc., Prof. — Dept. of Neuroendocrinol., Inst. of Psychiatry, The Maudsley Hosp., Denmark Hill, LONDON S.E.5, England
  a. Effects of hormones on central nervous development. *(Rodentia)*

EBERT, J. D. Ph.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
— Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE 18, Md., U.S.A.
  a. The metabolic characteristics of the heart-forming areas of the early embryo. *Gallus gallus (Aves)*
  b. The graft-versus-host reaction and development of immune mechanisms in the embryo. *Gallus gallus (Aves)*
  c. Animal viruses (esp. tumor viruses) as tools in studying embryonic development. *Gallus gallus (Aves)* (in collaboration with M. E. KAIGHN)
  d. Development of interferon in the chorioallantois in vitro. *Gallus gallus (Aves)*

ECHAVE LLANOS, J. M. M.D., Prof. — Inst. de Patol. Gener. y Exper., Fac. de Ciencias Med., Univ. Nac. de Cuyo, Casilla de Correo 513, MENDOZA, Argentina.
  a. Liver regeneration: experimental factors (circadian rhythms, fasting, counting methods) influencing the scatter of values in the study of the action of tissue growth factors. *Mus musculus (Rodentia)*

EDDS, M. V., Jr. B.A., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Biol, Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.
  a. Development of collagenous lamellae. *Rana pipiens (Anura)*

EDE, D. A. B.Sc., M.S., Ph.D. — A.R.C. Poultry Research Centre, King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
  a. Analysis of the action of inherited abnormalities and lethal genes in development. *Gallus gallus (Aves)*

EDSTRÖM, J.-E. Dept. of Histol., Univ. of Umeå, UMEÅ, Sweden

EGAMI, N. Ph.D. — Div. of Biol., Nat. Inst. of Radiol. Scis, Anagawa 4-9, CHIBA, Japan
  a. Change in radiation-sensitivity during embryonic development. *Oryzias latipes (Teleostei)* (in collaboration with Miss Y. HYODO)
  b. Embryology of endocrine organs. *Oryzias latipes (Teleostei)* (in collaboration with Miss Y. HYODO)
  c. Effect of ionizing radiation on embryos. *Oryzias latipes (Teleostei)*

EGELHAAF, A. Dr.rer.nat. — Zool. Inst. der Univ., Hölderlinstr. 12, TÜBINGEN, Deutsche Bundesrepublik
  a. Genetische Grundlagen der Differenzierung von Augenpigmenten. *Ephestia kühniella (Lepidoptera)*
  b. Phänokopien. *Ephestia kühniella (Lepidoptera)*
  c. Morphogenetische Genwirkungen. *Ephestia kühniella (Lepidoptera), Drosophila melanogaster (Diptera)*

EGUCHI, G. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
  a. Histochemical and electron microscopic studies on lens regeneration. *Triturus pyrrhogaster, Hynobius* spec. *(Urodela)*
  b. Organ culture of pigmented epithelium of iris and retina *(Amphibia)*

EHN, J. A. Fil.dr. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden
- a. Effects of sulphydryl-blocking and other substances on development of the embryo. *Agelena labyrinthica (Arachnoidea)*
- b. Animalization and vegetalization of the embryo by means of chemical agents. *Agelena labyrinthica (Arachnoidea)*

EIDMANN, H. H. Dr. — Dept. of Forest Entomol., Roy. Coll. of Forestry, STOCKHOLM 50, Sweden
- a. Physiology of postembryonic development and diapause; coldhardiness of developmental stages. *Coleophora laricella (Lepidoptera), Hylobius abietis (Coleoptera)*
- b. Physiology of embryonic development. *Carausius morosus (Orthoptera)*

EISENBERG, Miss S. B.Sc., M.S., Ph.D. — Centro de Investigación y Estudios Avanzados. Inst. Politécnico Nacional, Apartado Postal 14740, MÉXICO 14, D.F., México
- a. DNA synthesis in the regenerating lens. *(Urodela)*
- b. The cell cycle in the lens regenerating system (autoradiography). *Triturus viridescens (Urodela)*
- c. The mitochondrial system in the developing embryo (differential centrifugation, polarography). *Xenopus laevis (Anura), Ambystoma mexicanum (Urodela)*

EISLER, R. B.A., M.S., Ph.D., — Sandy Hook Marine Lab., U.S. Fish and Wildlife Service, Box 428, HIGHLANDS, N.J., U.S.A.
- a. Artificial propagation. *Pseudopleuronectes americanus (Pleuronectidae, Teleostei), Tautoga onitis (Labridae, Teleostei)*

ELBERS, P. F. Ph.D. — Centrum voor Submicroscopisch Onderzoek van Biologische Objecten, Janskerkhof 3, UTRECHT, Netherlands
- a. Experimental morphology of cell membrane and cytoplasmic structures in early developmental stages. *Limnaea stagnalis (Pulmonata, Gastropoda)*

EL-EISHI, H. I. S. M.B., B.Ch. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England
- a. A chemical study of the development of myelin in the spinal cord. *Gallus domesticus (Aves), Cavia porcellus (Rodentia)*

ELGAMMAL, A. E. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt
- a. On the effect of thyroxine and iodine on metamorphosis. *Bufo regularis (Anura)*

ELIASSON (KLEIN), Mrs. E. Fil.lic. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
- a. Enzyme induction and repression, particularly arginase. *Gallus* spec. *(Aves)*
- b. Induction and repression of enzyme synthesis in cells in tissue culture. *(Mammalia)*

ELLISON, Mrs. K. E. B.S. — Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.

EL MALKH, N. M. B.Sc. — Dept. of Zool., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt
- a. Studies on hind limb regeneration. *Bufo regularis (Anura)* (in collaboration with M. I. MICHAEL)

ELSDALE, T. R. Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
— M.R.C. Unit for the Clinical Effects of Radiation, Western General Hosp., EDINBURGH, Scotland
a. Small aggregate cultures of embryonic cells. *Rana pipiens (Anura)*
b. Cell differentiation in cultured cells. *Gallus* spec. *(Aves), Rattus* spec. *(Rodentia), Homo sapiens (Primates)*

EMANUELSSON, H. Fil.Dr. — Zoophysiol. Inst., Univ. of Lund, LUND, Sweden

EMELIANOV, S. V. Dr.biol.sci., Prof. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
a. Early postembryonic development under artificial breeding. *Acipenser* spp., *Huso huso (Acipenseridae, Chondrostei)*
b. Heterochronies in development. Representatives of different classes *(Vertebrata)*

EMERIT, M. Agreg. ès Sci. — Lab. de Zool. et de Biol. génér., Fac. des Sci., Univ. de Madagascar, TANANARIVE, Madagascar
a. Embryology, development, sexual biology. *Gasteracantha* spec. *(Argiopidae, Araneae)*

ENDO, Y. D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
a. Study of fertilization and development. *(Echinoidea)*
b. Electron microscopical study of oogenesis. *(Echinoidea)*

ENEMAR, E. A. W. Fil.dr. — Zootom. Dept., Zool. Inst., Univ. of Lund, LUND, Sweden
a. Development of hypothalamo-hypophysial relationships (structure and function). *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

ENGELBRECHT, D. van Z. D.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, South Africa
(no embryological work in progress)

ENGLÄNDER, H. Dr.med., Dr.rer.nat., M.I.I.E., Prof. — Zool., Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik
a. Regionalspezifische Induktion. *(Urodela)*
b. Die Wirkung von Lithium auf die Differenzierungsleistung des Ektoderms. *(Urodela)*

ERHART, E. A. M.D., Ph.D. — Sect. of Neuroanat., Dept. of Anat., Fac. de Med., Univ. de Sao Paulo, Caixa Postal 2921, SAO PAULO, Brasil
a. Degeneration and regeneration of peripheral nerve fibres. *Canis familiaris (Carnivora)*

ERICKSON, A. E. A.B., M.A., Ph.D. — Worcester Foundation for Exp. Biol., 222 Maple Avenue, SHREWSBURY, Mass., U.S.A.
a. Sex differentiation, gonadogenesis. *Gallus domesticus (Aves)*
b. Regulation and modification of sex differentiation. *Gallus domesticus (Aves)*
c. Transplantation of ovaries and testes. *Gallus domesticus (Aves)*

ERICSON (STRANDVIK), Mrs. B. Cand.Med. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden
a. Experimental teratology (salicylate etc.). *Mus musculus (Rodentia)*

ERNSTRÖM, U. M.D. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden

a. Thymus and postnatal growth of lymphatic tissue. *Cavia* spec., *Mus* spec. *(Rodentia)*

ESCHENBERG, Miss K. M. M.A., Ph.D. Prof. — Dept. of Biol. Scis., Clapp Lab., Mount Holyoke Coll., SOUTH HADLEY, Mass. 01075, U.S.A.

a. Cytology and developmental physiology of the ovary (histochemistry and autoradiography). *Gerris remigis (Hemiptera)*

b. Relation of protein synthesis to oral regeneration (amino acid analogues). *Blepharisma* sp. *(Spirotrichida, Ciliata)*

ESHEL, Mrs. Sh. M.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

a. The effect of injury on embryo formation in folded blastoderms. *Gallus domesticus (Aves)*

ETKIN, W. Ph.D., Prof. — Dept. of Anat., Albert Einstein Coll. of Med., Yeshiva Univ., Eastchester Rd. and Morris Park Ave., NEW YORK 61, N.Y., U.S.A.

ETOH, H. Dr.Agric. — Div. of Biol., Nat. Inst. Radiol. Scis, Anagawa 4-9, CHIBA, Japan

a. Long term effects of low doses of ionizing radiation on various embryonic stages. *Oryzias latipes (Teleostei)*

EVANNI, A. E. M. Fil.mag. — Zool. Inst., Univ. of Gothenburg, Fjärde Långgatan 7B, GÖTEBORG-SV, Sweden

a. Transplantations in the neural tube of embryos. *Gallus* spec. *(Aves)*

EVANS, H. E. B.S., Ph.D., Prof. — Dept. of Anat., Veterinary Coll., ITHACA, N.Y., U.S.A.

a. General embryology. *Canis familiaris (Carnivora)*

b. Cyclopia. *Ovis aries (Artiodactyla)*

EVANS, J. V. B.Sc.(N.Z.), B.V.Sc.(Syd.), M.R.C.V.S., D.Sc., Prof. — Dept. of Physiol., Univ. of New England, ARMIDALE, N.S.W., Australia

a. Development of blood system. *(Artiodactyla)*

EVANS, M. J. B.A. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Changes in types of RNA in different developing tissues and in the nucleotide base composition. *Xenopus laevis (Anura)* (in collaboration with Miss E. M. DEUCHAR)

EVREN, A. Dr.Vet. — Inst. of Histol. and Embryol., Veter. Fac., Ankara Univ., ANKARA, Turkey

a. Early development and embryogenesis. *Indoplanorbis exustus (Pulmonata, Gastropoda)*

EYAL (GILADI), Mrs. H. M.Sc., Ph.D., M.I.I.E. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

a. The effect of chlorpromazine on embryonic development. *(Amphibia)*

b. Embryo formation in folded blastoderms. *Gallus domesticus (Aves)*

c. An attempt to alter the developmental direction of unincubated blastoderms by artificially creating multilayered systems. *Gallus domesticus (Aves)*

EYRIES, Ch. Dr. en Méd. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Oreille interne et complexe acoustico-facial. *Homo sapiens (Primates)*

FABER, J. Ph.D., M.I.I.E. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands
- a. Experiments to test the respective roles of epidermis and mesenchyme in the establishment of the morphogenetic pattern in the limb regenerate. *Ambystoma mexicanum (Urodela)*
- b. The action of drugs on limb regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with D. O. E. GEBHARDT, Rijks Inst. v. d. Volksgezondheid)
- c. Gene action and differentiation of imaginal discs in homoeotic mutants. *Drosophila melanogaster (Diptera)*
- d. Normal and intergeneric hybrid development. *(Acheilognathinae, Teleostei)* (in collaboration with J. J. DUYVENÉ DE WIT, Bloemfontein)

FABRO, S. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

FALIN, L. I. M.D. — Dept. of Histol. and Embryol., Moscow Stomatol. Inst., Kaljaevskaiia 18, MOSCOW, U.S.S.R.

FALLIERI, L. A. B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M. G., Brasil
- a. Cytochemistry of development. *Australorbis glabratus (Pulmonata, Gastropoda)*

FANKHAUSER, G. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J. 08540, U.S.A.
- a. Development of diploid and heteroploid embryos implanted under the skin of adults. *Triturus* spec. *(Urodela)*
- b. Constancy of somatic chromosome numbers. *(Urodela)*
- c. Study of the karyogram. *Triturus viridescens (Urodela)*

FARAG, A. E. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt
- a. Descriptive and experimental studies on the development of the eye. *Bufo regularis (Anura)*

FARBEROV, A. I. — Dept. of embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
- a. The influence of ionizing radiation on structure and function of retinal cells. *Rana* spp. *(Anura)*
- b. The influence of light on development and differentiation of the eye. *Rana spp. (Anura)*
- c. The influence of light on mitotic activity of retinal cells. *(Anura)*
- d. The influence of some parts of the retina on the induction and differentiation of the lens. *(Anura)*

FARFAGLIO, Miss G. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
- a. Microrespiration in isolated blastomeres.

FARGEIX, N. Lic.es Sci. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France
- a. Les cellules germinales chez l'embryon. *(Aves)*

FARINELLA (FERRUZZA), Mrs. N. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
- a. Xenoplastic tailbud transplantations. *(Amphibia)*
- b. Combinations and transplantations of blastomeres. *(Ascidiae)*
- c. Induction of the nervous system. *(Ascidiae)*

FAURÉ-FREMIET, E. Dr., M.I.I.E., Prof.hon. — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

FAUTREZ, J. C. M.D., Member of the Royal Flemish Acad. of Sci., M.I.I.E., Prof. — Lab. of Anat., Fac. of Med., Univ. of Gent, Ledeganckstraat 35, GENT, Belgium

FAUTREZ (FIRLEFYN), Mrs. N. J. — Lab. of Anat., Fac. of Med., Univ. of Gent, Ledeganckstraat 35, GENT, Belgium

a. Influence of actinomycin D and amino-groups on cleavage and early development. *Artemia salina (Anostraca), Brachydanio rerio (Teleostei)*

FEDECKA (BRUNER), Mrs. B. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Recherches sur la régénération de l'appareil copulateur et des gonades. *Dugesia lugubris, D. tigrina, Polycelis nigra (Turbellaria)*

FEDOROFF, S. B.A., M.A., Ph.D., Prof. — Dept. of Anat., Univ. of Saskatchewan, SASKATOON, Saskatchewan, Canada

a. Genetics of congenital diseases.
b. Cytolysis and cytocidal systems.
c. Development of cell surface antigens.
d. Passage of heterophile cytotoxic antibodies through placenta.

FELDMAN, M. M.Sc., Ph.D., M.I.I.E. — Dept. of Cell Biol., Weizman Inst. of Sci., REHOVOTH, Israel

FELL, Dame Honor B. Dr., M.I.I.E., F.R.S., Prof. — Strangeways Research Lab., Wort's Causeway, CAMBRIDGE, England

FELTS, W. J. L. A.B., A.M., Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

a. Skeletal growth and development.
b. Effects of mechanical factors on bone and cartilage growth.
c. Density and inorganic/organic ratio in developing skeleton. *(Rodentia)*
d. Skeletogenesis in marine forms. *(Mammalia)*
e. Age changes in skeletal physical characteristics. *(Rodentia)*
f. An analysis of mechanical organization, differential growth and microstructure of limb bones of small forms. *Delphinapterus leucas, Globicephala melaena (Cetacea)*

FENNELL, R. A. A.B., Ph.D., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich., U.S.A.

a. The response of tissues of the embryo to chorioallantoic grafts with special reference to the effects of thymus and bursa. *Gallus domesticus (Aves)*
b. Some histochemical observations on the effects of chorioallantoic grafts on the spleen, bursa, and peripheral blood of the embryo. *Gallus domesticus (Aves)*
c. A comparison of the hydrolases, oxireductases, and transglucosylases in the lymphatic tissues of normal and RPL virus resistant and susceptible embryos. *Gallus domesticus (Aves)*
d. Antibody production in embryos and in young animals of various ages. *Gallus domesticus (Aves)*

FERNANDEZ, Miss M. E. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289, TUCUMAN, Argentina.

a. Estimation and localization of desoxyribonucleic acids during egg development. *Bufo arenarum (Anura)*
b. Biosynthesis of ribonucleic acids during early development. *Bufo arenarum (Anura)*

FERREIRA, A. L. M.D., Ph.D. — Dept. de Morfol. Humana Funcional e Aplicada, Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, SÃO PAULO, S.P., Brasil
a. Caryometric study of spermatogenesis. *Rattus rattus (Rodentia)*

FERRIER, V. Lic.ès Sci. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE,France
a. Hybridation intergénérique. *(Urodela)*
b. Gynogénèse. *Pleurodeles waltlii (Urodela)*

FICQ, Mrs. A. A. Dr.enSci. Biol., M.I.I.E. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
a. Etude autoradiographique du métabolisme au cours de l'oogénèse. *Asterias* spec. *(Asteroidea, Echinodermata)*, *Rana* spec. *(Anura)*
b. Observations autoradiographiques sur l'oogénèse et la morphogénèse. *Pleurodeles* spec., *Triturus* spec. *(Urodela)*, *Rana fusca (Anura)*
c. Metabolism of purines and pyrimidines during oogenesis and development. *Paracentrotus* spec. *(Echinoidea)*, *(Amphibia)*
d. Studies on metabolism during maturation. *Asterias rubens, Arbacia lixula, Paracentrotus lividus (Echinodermata), Pleurodeles waltlii (Urodela)*

FILOGAMO, G. M.D., Prof. — Ist. di Istol. ed Embriol. Gener., Corso Massimo d'Azeglio 52, TORINO, Italia
a. The development of spinal ganglion cells studied by in vitro culture (silver staining, phase contrast cinematography). *Gallus domesticus (Aves)*
b. The differentiation of neuro-muscular junctions (histochemistry, electron microscopy). *Lebistes reticulatus (Teleostei), Bufo bufo (Anura), Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*

FILOSA, M. F. B.S., M.S., Ph.D. — Dept. of Biol., Oberlin Coll., OBERLIN, Ohio, U.S.A.
a. Variation and differentiation; effects of various analogues on differentiation. *Dictyostelium mucoroides (Acrasiales)*
b. Synthesis and utilization of trehalose during development. *Dictyostelium mucoroides (Acrasiales)*
c. Differentiation of macrocysts. *Dictyostelium mucoroides (Acrasiales)*

FIMIAN, W. J., Jr. A.B., M.S., Ph.D., Prof. — Dept. of Biol., Boston Coll., CHESTNUT HILL 67, Mass., U.S.A.
a. X-radiation and chemical pre-protection in limb regeneration (in vivo and in vitro) *Triturus viridescens (Urodela)*

FINGER, I. B.A., Ph.D., Prof. — Dept. of Biol., Haverford Coll., HAVERFORD, Pa., U.S.A.
a. Immunogenetic studies in relation to cell differentiation. *Paramecium aurelia (Ciliata)*

FINN, C. A. B.Sc., M.R.C.V.S. — Wye Coll., Near ASHFORD, Kent, England
a. Experimental studies on implantation of ova. *(Rodentia)*

FINNEGAN, C. V. B.S., M.S., Ph.D., Prof. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a. Analysis of postgastrula somite differentiation. *Taricha torosa, Amblystoma gracile (Urodela)*
b. Analysis of the role of tissue environment during neurogenesis. *Taricha torosa, Amblystoma gracile (Urodela)* (in collaboration with R. LANDESMAN)
c. Cytochemical and electron microscope examination of endo- and ectomesenchymal differentiation. *Taricha torosa, Amblystoma gracile (Urodela)*
d. Studies of postgastrula enzyme differentiation. *Rana aurora (Anura), Taricha torosa, Amblystoma gracile (Urodela)*

FIORONI, P. Dr.phil. — Zool. Anstalt der Univ., Rheinsprung 9, 4000 BASEL, Schweiz

a. Development of integument (chromatophores, shell), coelom and yolk sac. *Loligo* spec., *Alloteuthis* spec., *Sepiola* spec., *Sepietta* spec., *Sepia* spec. *(Decapoda), Eledone* spec., *Octopus* spec. *(Octopoda, Mollusca)*
b. Morphological problems of embryonic nutrition (yolk, albumine, food-eggs). *(Prosobranchia, Gastropoda)*

FISCHBERG, M. Dr.Phil. (Zürich), M.A. (Oxford), M.I.I.E., Prof. — Station de Zool. expér., Univ. de Genève, Route de Malagnou 154, Chêne-Bougeries, GENÈVE, Suisse

FISCHER, A. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

FISCHMAN, D. A. A.B., M.D. — Dept. of Zool., Univ. of Chicago, 1101 East 57th street, CHICAGO, Ill. 60637, U.S.A.

a. Myogenesis in embryonic skeletal muscle; a descriptive and experimental morphological study. Synthesis and organization of myofilaments; electron microscopy, tissue culture, sucrose gradient centrifugation, immunology, radioisotope counting. *Gallus domesticus (Aves)*

FITZGERALD, L. R. Ph.D. — Dept. of Anat., Med. Units, Fac. of Basic Med. Sci., Univ. of Tennessee, MEMPHIS 3, Tenn. ,U.S.A.

FLAMM, H. M.D., Prof. — Hygien. Inst. der Univ., Kinderspitalgasse 15, WIEN IX, Oesterreich

a. Infections of the blastocyst by viruses: fate of the blastocyst and embryo, duration of presence of the virus in the blastocyst. *Oryctolagus cuniculus (Lagomorpha)*
b. Infections of fetus and placenta. *Homo sapiens (Primates)*

FLATIN, Miss J. — Dépt. de Biol. Génér., Fac. Cathol., 25 Rue du Plat, LYON 2è, France

FLEISCHHAUER. K. Dr.med., Prof. — Anat. Inst. der Univ., Univ. Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutsche Bundesrepublik

a. Post-natal development of the subependymal layers in various regions of the cerebral ventricles. *Felis domestica (Carnivora)*
b. Post-natal development of various subcortical regions and of the spinal cord. *Homo sapiens (Primates), Felis domestica (Carnivora)*

FLEXNER L. B. B.S., M.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

FLICKINGER, R. Ph.D., M.I.I.E., Prof. — Dept. of Biol., State Univ. of New York at Buffalo, BUFFALO, N.Y. 14214, U.S.A.

FLYNN, T. THOMSON D.Sc., M.B.E., M.I.I.E., Prof. — c/o Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

FOLLENIUS, E. Dr.ès Sci. — Lab. de Zool. et d'Embryol. expér., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France

a. Origine de la lignée germinale, morphogénèse et différenciation des gonades. *Xiphophorus Helleri, Lebistes reticulatus, Barbus* spec. *(Teleostei)*
b. Etude cytologique des différenciations hypophysaires au cours de la morphogénèse et de la différenciation génitale. *Lebistes reticulatus, Xiphophorus Helleri, Gasterosteus aculeatus (Teleostei)*
c. Etude de l'ultrastructure des cellules hypophysaires au cours du développement. *Lebistes reticulatus (Teleostei)*

FOOTE, Mrs. F. MARTINDALE B.A., M.A., Ph.D., M.I.I.E. — Dept. of Physiol., Southern Illinois Univ., CARBONDALE, Ill. U.S.A.

a. Growth and maintenance of newly hatched larvae in organ cultures *Pleurodeles waltlii (Urodela)*
b. Growth and maintenance of gonads of metamorphosing larvae in organ cultures. *Pleurodeles waltlii (Urodela)*
c. Growth and maintenance of gonads on synthetic media, and on standard media composed of chick embryo extract and agar. *Ambystoma mexicanum (Urodela)*
d. Utilization of albumen in the embryo. *Anas platyrhynchus, Coturnix coturnix japonica, Gallus domesticus (Aves)*

FORD, P. B.Sc., Ph.D., Prof. — Dept. of Zool. Univ. of British Columbia, VANCOUVER 8, B.C., Canada

a. Developmental histochemistry. *Raja binoculata (Selachii)*
b. Histochemistry of the development of the adrenal cortex. *Ambystoma mexicanum. (Urodela)*

FORD, P. J. B.A. — Dept. of Zool., Parks Rd., OXFORD, England

a. Biochemical embryology.

FOREMAN, Miss D. L. Ph.D. — Developm. Biol. Center, Dept. of Biol. Western Reserve Univ., 2127 Cornell Road, CLEVELAND 6, Ohio, U.S.A.

FORNI, Miss S. Med.Dott. — Ist. di Istol. ed Embriol. gener., Fac. di Med. e Chir. dell'Univ. di Milano, Via Ponzio 7, MILANO, Italia

a. Qualitative and quantitative study of oogenesis: 1) in situ in neonatal ovary, 2) in cultured neonatal ovaries with or without addition of FSH and LH. *Mus norvegicus albus (Rodentia)*

FORSBERG, J.-G. — Dept. of Anat., Univ. of Lund, Biskopsgatan 7, LUND, Sweden

a. Comparative investigations on the development of the vagina. *(Mammalia)*
b. Hormonal influence on development of genital organs. *Mus* spec. *(Rodentia)*
c. Studies on the inductive influences related to the transformation of the Müllerian epithelium in the vaginal anlage. *Mus* spec. *(Rodentia)*

FORSTRÖNEN, P. F. M.D. — Anat. Inst., Univ. of Bergen, BERGEN, Aarstadvollen, Norway

a. The origin and the morphogenetic significance of the external granular layer of the cerebellum, as determined experimentally. *Gallus domesticus (Aves)*

FORTAK, W. — Inst. of Histol. and Embryol., Acad. of Med., Narutowicza 60, ŁÓDŹ, Poland

FOSSARD, R. A. de B.Sc.Hons., M.Sc. — Dept. of Bot., Univ. of New England, ARMIDALE, N.S.W., Australia
- a. Physiology of flower initiation; development of bioassay for floral initiating substances based on in vitro culture of defoliated stem tips; histo- and cytochemical study of vegetative and reproductive apices. *Chenopodium rubrum. (Chenopodiaceae)*

FOURCHE, J. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France
- a. Le métabolisme respiratoire au cours du développement. *Drosophila melanogaster (Diptera)*

FOURNIER, B. Lic. ès Sci. — Lab. de Zool. expér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France
- a. Recherches descriptives et expérimentales sur la morphogénèse embryonnaire des appendices. *Carausius* spec. *(Orthoptera)*

FOWLER, J. A. B.S.E., M.A., Ph.D. — Dept. of Biol., State Univ. of New York at Stony Brook, STONY BROOK, N.Y., U.S.A.
- a. Development of hybrids. *Rana pipiens (Anura)*
- b. Development of coastal marine forms and their hybrids. *(Poeciliidae, Teleostei)*

FOX, A. S. Ph.D., Prof. — Dept. of Genet., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.
- a. Tissue culture of embryonic cells. *Drosophila melanogaster (Diptera)*
- b. Developmental genetics. *Drosophila melanogaster (Diptera)*

FOX H. Ph.D., D.Sc. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
- a. Factors influencing pronephric growth and degeneration. *Rana temporaria (Anura)*
- b. Pronephric system in haploids. *Xenopus laevis (Anura)* (in collaboration with Miss L. HAMILTON, Middlesex Hosp. Med. School)
- c. Development of the pronephric duct. *Xenopus laevis (Anura)* (in collaboration with Miss L. HAMILTON, Middlesex Hosp. Med. School)
- d. Development of the head and pharynx. *Neoceratodus* spec. *(Dipnoi)*

FRANCIS, D. — Dept. of Zool., Univ. of B.C., VANCOUVER, B.C., Canada

FRANCIS, D. W. M.S., Ph.D. — Univ. of British Columbia, VANCOUVER 8, B.C., Canada
- a. Developmental physiology. *Polysphondylium pallidum (Acrasiales)*

FRANÇOIS, Y. Dr.ès Sci., Prof. — Lab. d'Anat. et d'Histol. comp., 7 Quai St. Bernard, PARIS Ve, France
- a. Development of paired fins. *(Teleostei)*
- b. Development of vertebrae. *Polypterus* spec. *(Dipnoi), (Teleostei)*
- c. Growth of embryo. *(Teleostei)*

FRANK, Miss Z. Dr.med. — Inst. of Histol. and Embryol., Fac. of Med., ZAGREB, Salata, Yugoslavia

FRANKEL, J. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.

a. Morphogenesis. *Tetrahymena* spec. *(Holotricha, Ciliata)*

FRANKENBERGER, Z. MUDr., Dr.Sc., Prof. (Emer.) — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia

a. Embryology. *(Cervidae, Mammalia)*

FRANZÉN, Å. S. Fil.Dr. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden

a. Comparative study of the spermatozoon and spermatogenesis. *(Invertebrata)*
b. Larval development. *(Brachiopoda)*

FRASCHINI, Miss A. Ph.D. — Ist. di Anat. comp., Univ. di Pavia, PAVIA, Italia

a. Development and regression of yolk sac. *Gallus domesticus (Aves)*
b. Functional differentiation of gastric epithelium (studies on metamorphosis; histochemical methods). *Salamandra atra, S. maculosa (Urodela)*
c. The cutaneous glands in metamorphosis (histochemical methods). *Salamandra atra, S. maculosa (Urodela)*

FRASER, F. C. Ph.D., M.D., Prof. — Dept. of Genet., McGill Univ., MONTREAL, Quebec, Canada

a. The experimental production of congenital defects, chiefly by maternal treatment with cortisone and 6-aminonicotinamide. *Mus musculus (Rodentia)*
b. Mechanism of embryonic palate closure, and factors that interfere with it. *Mus musculus (Rodentia)*

FRASER, R. C. B.S., M.S., Ph.D., Prof. — Dept. of Zool. and Entomol., Univ. of Tennessee, KNOXVILLE, Tenn. 37916, U.S.A.

FRATELLO, B. Dr.Biol.Sci. — Ist. di Anat. Comp., Fac. di Sci. Fis. Mat. e Nat., Univ. di Modena, Via Berengario 14, MODENA, Italia

a. Cellular growth and mitotic ratio in nervous system. *Triturus cristatus, Xenopus laevis, Bufo bufo (Amphibia)*
b. Gametogenesis and nuclear differentiation. *Toxocara mystax (Ascaridae, Nematoda)*

FREDEEN, F. J. H. B.S.A., M.Sc. — Research station, Research Branch, Canada Agricult., Univ. Sub Post Office, SASKATOON, Sask., Canada

a. Life cycles. *Simulium* spp. *(Simulidae, Diptera)*
b. Life cycles and laboratory culture. *Leptocera caenosa (Borboridae, Diptera)*

FREEMAN, G. B.S., Ph.D. — Dept. of Zool., Univ. of Illinois, URBANA, Ill., U.S.A.

a. Cells which form tissues of new animal during asexual reproduction. *Perophora viridis (Tunicata)*
b. Tissue culture of unincubated blastoderm cells. *Gallus domesticus (Aves)*

FREEMAN, Miss G. — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas 66045, U.S.A.

FRIANT, Mrs. M. Dr. ès Sci., Dr. en Méd., Prof. — Ecole d'Anthropol. de P. Broca, 1 Place d'Iéna, PARIS XVIe, France

a. Development of the skeleton. *(Reptilia; Aves; Mammalia)*
b. Development of the teeth. *(Mammalia)*
c. Development of the brain. *(Mammalia)*

  d. Development of pterylosis. *(Aves)*
  e. Development of cartilage, bone and horn. *(Vertebrata)*

FRIDBERG, G. Fil.Dr. — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden
  a. Development of neurosecretory parts of brain, urophysis. *(Teleostei)*

FRIEDMAN, H. — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas, U.S.A.

FRITSCH J. P. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

FRY, D. J. B.A. — Dept. of Human Anat., Univ. Museum, South Parks Road, OXFORD, England
  a. Study of ion fluxes in oocytes. *Bufo bufo (Anura)* (in collaboration with D. A. T. DICK)

FRYE, B. E. B.S., M.S., Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
  a. Removal and transplantation of the dorsal pancreatic rudiment in larvae: effect upon growth and differentiation of the pancreas and the larvae. *Ambystoma punctatum, Eurycea bislineata (Urodela), Rana pipiens (Anura)*
  b. Histochemical study of the differentiation of the islets of Langerhans in normal and cortisone-treated embryos. *Gallus domesticus (Aves)*
  c. Functional differentiation of the islets of Langerhans: islet growth and differentiation and blood sugar regulation by the larvae. *Rana pipiens, R. clamitans (Anura)*
  d. Comparison of the insulin-independent monosaccharide space of larval and adult animals (tracer studies). *Rana pipiens (Anura)*

FUJII, R. Ph.D. — Div. of Biol., Nat. Inst. of Radiol. Scis, Anagawa 4-9, CHIBA, Japan
  a. Physiological studies on the changes in the reponsiveness of melanophores during embryonic development. *Salmo irideus (Teleostei)*

FUJII, T. Dr.Sci., M.I.I.E., Prof. — Zool. Inst., Fac. of Sci., Tokyo Univ., Bunkyo-ku, TOKYO, Japan

FUKUDA, S. D.Sc., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
  a. Hormonal mechanisms of metamorphosis and diapause. *(Insecta)*
  b. Mechanism of oviposition. *(Insecta)*

FUKUSHI, T. M.Sc. — Inst. for Protein Research, Osaka Univ., Kitaku, OSAKA, Japan
  a. The role of the adhesiveness of the cell surface in morphological differentiation of embryonic cells. *Hemicentrotus pulcherrimus (Echinoidea)*
  b. Developmental potencies of embryonic cells in the course of differentiation. *Hemicentrotus pulcherrimus (Echinoidea)*
  c. The relation between cleavage pattern and differentiation. *Hemicentrotus pulcherrimus (Echinoidea)*

FULDNER, D. Dr. — Zool. Inst. der Univ., Röntgenring 10, WüRZBURG, Deutsche Bundesrepublik
  a. Induktion. *Branchiostoma* spec. *(Acrania)*
  b. Inkretorisches System während der postembryonalen Entwicklung. *Tachycines asynamorus (Rhaphidophoridae, Saltatoria, Orthoptera)*

FULTON, C. M. Ph.D. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.
- a. Factors affecting growth and growth patterns. *Cordylophora* spec., *Hydra* spec. *(Hydroidea)*
- b. Factors affecting morphological alteration. *Naegleria* spec. *(Protozoa)*

FURUSAWA, M. M.Sc. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
- a. Immunological studies on the nature of male and female. *Mus musculus (Rodentia)*
- b. Studies on the species-specific antigenicities of the cell membrane. *Mus musculus (Rodentia)*

GABAJEBVA, Mrs. N. S. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.
- a. Genesis and functional role of egg membrane. *Rana temporaria, Bufo bufo (Anura), Bos taurus, Ovis aries, Sus domestica (Artiodactyla)*

GABELLA, G. M.D. — Ist. di Istol. ed Embriol. Gener., Corso Massimo d'Azeglio 52, TORINO, Italia
- a. The differentiation of neuro-muscular junctions (histochemistry, tracer studies). *Lebistes reticulatus (Teleostei), Bufo bufo (Anura), Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*

GABIE (GUBBAY), Mrs. V. B.Sc., Ph.D. — Dept. of Zool., Univ. of the Witwatersrand, Milner Park, JOHANNESBURG, Republic of South Africa
- a. Histochemical study of histones in the regenerating lens. *Triturus viridescens (Urodela)* (in collaboration with Miss A. ANDREW)
- b. Autoradiographic studies of lens induction (changes in RNA- & protein synthesis during induction). *Xenopus laevis (Anura)* (in collaboration with Miss A. ANDREW)

GAILLARD, P. J. Med.Dr., M.I.I.E., Prof. — Lab. for Cell biol. and Histol., Fac. of Med., State Univ., Rijnsburgerweg 10, Boerhaavekwartier, LEIDEN, Netherlands
- a. Hormones and bone development (organ culture, enzyme chemistry, isotope techniques, electron microscopy). *Gallus domesticus (Aves), Mus musculus (Rodentia)*

GALASSI, L. D.Sc. — Worcester Foundation for Exp. Biol., 222 Maple Avenue, SHREWSBURY, Mass., U.S.A.
- a. Induction of the lens. *Gallus domesticus (Aves)*
- b. Placental growth (immunology). *Rattus rattus (Rodentia)*

GALL, J. G. B.S., Ph.D., Prof. — Dept. of Biol., Josiah Willard Gibbs Research Lab., Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.
- a. Synthesis of RNA and protein during oogenesis (cytochemistry, biochemistry). *Triturus viridescens (Urodela)*

GALLERA, J. D.Sc., M.I.I.E. — Lab. d'Embryol. expér., Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue de l'Ecole de Médecine, GENÈVE, Suisse
- a. The regulative and inductive capacities of the different regions of the primitive streak. *Gallus domesticus (Aves)*
- b. The problem of the polarity of the early blastoderm. *Gallus domesticus (Aves)*
- c. Competence of the ectoblast, in space and time, during the course of induction. *Gallus domesticus (Aves)*

d. The time required for primary induction. *Gallus domesticus (Aves)*
e. Mechanisms involved in the induction process. *Gallus domesticus (Aves)*

GALLIEN, L. Dr.ès Sci., M.I.I.E., Prof. — Lab. d'Embryol., Fac. des Sci. de Paris, 9 Quai St. Bernard, PARIS Ve, France
a. Ontogenèse sexuelle. *(Amphibia)*
b. Hétéroploïdie expérimentale. *(Amphibia)*
c. Greffes nucléaires. *(Amphibia)*
d. Lampbrush chromosomes. *(Urodela)*
e. Métabolisme des stéroïdes sexuels dans l'ontogenèse. *(Amphibia)*
f. Cytogenetics. *Ambystoma mexicanum, Pleurodeles waltlii, P. poireti, Triturus palmatus, T. alpestris, T. cristatus, T. marmoratus (Urodela), Rana temporaria, Bombina variegatus, Xenopus laevis, Discoglossus pictus, Bufo bufo, B. regularis, B. calamita, Pelobates cultripes, Limnodynastes tasmaniensis (Anura)*
g. Serology. *(Amphibia)*

GAMBLE, H. J. M.Sc., Ph.D. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E.1, England
a. Development of peripheral nervous tissues in the foetus. *Homo sapiens (Primates)*

GANGULY, B. M.Sc., Ph.D. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India
a. Physiology of cell contact. *(Porifera)* (in collaboration with S. MOOKERJEE, D. LAHIRI and Miss S. MAKHIJA)
b. Cytochemistry of regeneration. *(Porifera)*
c. Differentiation in relation to regeneration. *(Porifera, Coelenterata)* (in collaboration with S. MOOKERJEE and A. SINHA)
d. Tissue culture and autoradiography. *Ephydatia* spec. *(Porifera), Hydroidea), Gallus domesticus (Aves), Mus musculus (Rodentia)*

GANGULY, D. N. M.Sc., D. Phil. — Cell Research Unit, Dept. of Zool., Univ. of Calcutta, 35, Ballygunje Circular Road, CALCUTTA 19, India
a. Development of the vertebral column and cranio-vertebral joints in the vertebrate series. *(Vertebrata)*
b. Development of the Weberian ossicles. *(Teleostei)*
c. Chemical morphogenesis of the vertebral column. *Bufo melanostictus Anura)*

GANSEN (RASMONT), Mrs. P. van Agrégé — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique
a. Descriptive and experimental morphology of ribosomes during oogenesis and early stages (electron microscope studies). *Xenopus laevis (Anura)*
b. Descriptive morphology of chloroplasts, ribosomes and nucleus (electron microscope studies). *Acetabularia mediterranea (Algae)*

GARAVINI, Mrs. C. Dr. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia
a. Metamorphosis of thymectomized larvae. *Bufo bufo (Anura)*

GARCIA, A. Dr. en Med. — Servicio de Embriol., Dept. Anat. Prof. Dr. D. P. Gomez Bosque, Fac. de Med. de Valladolid, VALLADOLID, Spain

a. Action of barbituric compounds on embryonic development. *Gallus domesticus (Aves)*

GARGOUIL, Y. M. Dr.ès Sci., Prof. — Lab. de Physiol. anim., Fac. des Sci., Route de Limoges, POITIERS (Vienne), France

a. Electrophysiology of embryonic heart and muscles; study of the development of membrane properties. *Ambystoma tigrinum (Urodela), Cavia porcellus, Rattus norvegicus (Rodentia)*

GASSER, F. Dr.Biol. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE, France

a. Différenciation de diverses catégories de protéines au cours du développement; étude cytochimique et électrophorétique. *(Urodela)*

GASSIOLE, Mrs. D. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

GATES, A. H. Ph.D. — Dept. of Obstetrics & Gynecol., Stanford Univ. School of Med., PALO ALTO, Calif., U.S.A.

a. Factors influencing survival and development of the egg. *Mus musculus (Rodentia)*

GAUTHIER, A. Ing.Chim. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Métabolisme des oligoéléments. *Euglena gracilis (Flagellata)*

GAWRON (SKOWERSKA), Mrs. M. Ph.D. — Dept. of Gener. Biol., Silesian Acad. of Med., ZABRZE 8, Poland

a. The nucleo-plasmatic dynamics of the thyroid cell under the influence of thiouracil-derivatives. *Bufo bufo (Anura)*

b. The mitotic regulation of the thyroid gland. *Xenopus laevis (Anura)*

GAYET, J. F. Dr.ès Sci., Prof. — Inst. de Physiol. Génér., 15 Place Carnot, NANCY (Meurthe & Moselle), France

(no embryological work in progress)

GAZE, R. M. M.A., D.phil., L.R.C.P.E., L.R.C.S.E., F.R.S.E. — Dept. of Physiol., Univ. Med. School, Teviot Place, EDINBURGH 8, Scotland

a. Functional aspects of regeneration of the optic nerve. *Xenopus laevis, Rana temporaria (Anura)*

GEBHARDT, D. O. E. Ph.D. — Rijks Instituut voor de Volksgezondheid, Sterrenbos 1, UTRECHT, Netherlands

a. The action of drugs on embryonic development. *Gallus gallus (Aves), Mus musculus (Rodentia)*

b. The action of drugs on limb regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with J. FABER, Hubrecht Lab.)

GEHRING, W. Dipl.Sc.Nat. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

GEIGY, R. Dr., Prof. — Schweiz. Tropeninst., Socinstr. 57, BASEL, **Schweiz**

— Zool. Anstalt der Univ., Rheinsprung 9, BASEL, Schweiz

a. Spermatogenese, Ovogenese, Embryonalentwicklung und Endocrinologie. *(Ixodoidea, Acarina, Arachnoidea)* (in collaboration with A. AESCHLIMANN)

b. Spermatogenese, Ovogenese und Geschlechtsbestimmung. *Planococcus citri (Homoptera)* (in collaboration with A. AESCHLIMANN)

c. Uebertragung von Spirochaetosen über das mütterliche Ovarium auf die Embryonen und damit auf die Nachkommen der nächsten Genera-

tion. *(Argasidae, Acarina, Arachnoidea)* (in collaboration with A. AESCHLIMANN)
d. Entwicklung von humanpathogenen Erregern. (in collaboration with A. AESCHLIMANN)

GEILENKIRCHEN, W. L. M. Ph.D. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands.
a. Metabolism and respiration of egg and embryo. *Limnaea stagnalis (Gastropoda)*
b. Influence of various kations on development. *Limnaea stagnalis (Gastropoda)*
c. Analysis of mechanisms of cytodifferentiation in cleaving eggs. *Limnaea stagnalis (Gastropoda)*

GÉNIS-GÁLVEZ, J. M. Med.Dr., Ph.D. — Dept. de Anat. y Embriol., Fac. de Med., Univ. de Salamanca, SALAMANCA, Spain
a. Developmental physiology of the eye. *Gallus domesticus (Aves)*
b. Immunochemical studies of lens differentiation. *Gallus domesticus (Aves)*

GEORGE, J. C. Ph.D., Prof., F.Z.S., F.Z.S.I. — Dept. of Zool., M.S. Univ. of Baroda, BARODA 2, India
a. Physiology of development. *Limnaea* spec. *(Gastropoda)*, *Gallus* spec. *(Aves)*
b. Physiology of metamorphosis with special reference to fat metabolism. *Anthrenus vorax, Trogoderma granarium (Dermestidae, Coleoptera)*

GERISCH, G. Dr.rer.nat. — Zool. Inst. der Univ., Katharinenstr. 20, FREIBURG i.Brsg., Deutsche Bundesrepublik
a. Chemotaxis, Induktionswirkung von Aggregationszentren. *Dictyostelium minutum (Acrasiales)*
b. Zellkontaktbildung, Zelldifferenzierung, Entwicklungsdefekte bei Mutanten. *Dictyostelium discoideum (Acrasiales)*

GERKEN, Miss S. E. B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil
a. Cyto-embryology (DNA and nuclear size during development). *Hyla faber (Anura)*

GERZELI, G. Prof. — Ist. di Anat. comp., Univ. di Pavia, Piazza Botta 10, PAVIA, Italia
a. Electron microscopical studies on the oocytes. *Thysanozoon brocchii (Polycladidea, Turbellaria)*
b. Enterochromaffin cell system (histochemical studies). *(Tunicata)*
c. Egg-shell formation and vitelline cells (histochemical and histomorphological). *(Plathelminthes)*
d. Histochemical localization of transferases and redox enzymes during early development. *(Ascidiae)*

GEYER (DUSZYŃSKA), Mrs. I. Dr. — Dept. of Cytol., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
— temporarily: Station de Zool. expér., Univ. de Genève, Route de Malagnou 154, Chêne-Bougeries, GENÈVE, Suisse
a. Experimental studies on germ line chromosomes; further studies on the fate of germ cells with somatic chromosome number. *(Cecidomyidae, Diptera)*

b. The cytological analysis of the T-locus. *Mus musculus (Rodentia)*
c. Nucleo-cytoplasmic interactions in embryonic development. *Drosophila melanogaster (Diptera)*

GEZELIUS, N. G. B. Fil.lic. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Studies with labelled precursors of the correlations between protein synthesis and morphological development and of the interactions between nucleus and cytoplasm. *Paracentrotus lividus, Psammechinus miliaris (Echinoidea)*

GHIANI, P. Dr.Med. Dr.Sci.Nat., Prof.inc. — Ist. di Anat. e Fisiol. Comp., Univ. di Genova, Via Balbi 5, GENOVA, Italia

GHIRARDELLI, E. Prof. — Ist. Zool. e Anat. comp., Univ., Via Alfonso Valerio 32, TRIESTE, Italia
a. Germ cell differentiation. *(Planariidae, Turbellaria)*
b. Germ cell differentiation (Bidder's organ differentiation). *Bufo bufo (Anura)*
c. Germ cell determinant. *Spadella cephaloptera (Chaetognatha)*

GIBLEY, Ch. W., Jr. B.S., M.S., Ph.D. — Dept. of Biol., Villanova Univ., VILLANOVA, Pa. 19085, U.S.A.
a. Histochemistry of the developing excretory system. *Rana pipiens (Anura), Gallus domesticus (Aves), Mus musculus (Rodentia)*

GIDHOLM, L. Fil.lic. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Larval development. *(Syllidae, Polychaeta)*

GILBERT, P. W. A.B., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.
a. Studies on reproductive habits and structures, especially the clasper mechanism and the function of the siphon sacs. *(Elasmobranchii)*
b. Gestation and parturition in representative species. *Urolophus jamaicensis, Dasyatis americana (Elasmobranchii)*
c. Relationship of mother to developing young, both structural and functional. *(Elasmobranchii)*

GILES, E. T. M.Sc., Ph.D., D.I.C. — Dept. of Zool., Univ. of New England, ARMIDALE 5 N., N.S.W., Australia
a. Postembryonic development of reproductive organs and genitalia. *Labidura riparia truncata (Dermaptera)*

GILLIN, R. L. Fil.lic. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Regulation of enzyme synthesis in cells in vitro.
b. Established cell strains. *Homo sapiens (Primates)*

GILLOT (PERDRIX), Mrs. S. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France
a. Etude autoradiographique du métabolisme des acides nucléiques au cours de l'ovogenèse. *Drosophila melanogaster (Diptera), Bombyx mori, Galleria mellonella (Lepidoptera)*

GINSBURG, Mrs. A. S. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
a. Comparative investigations of the fertilization process. *(Pisces)*

GINSBURGER-VOGEL, T. Agr. — Lab. de Génét. évolutive du C.N.R.S., GIF-sur-Yvette, (S. et O.), France
a. Recherches sur la détermination génétique du sexe et de l'intersexualité. *Orchestia gammarellus (Amphipoda, Crustacea)*

GINZBURG, G. I. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

GIPOULOUX, J.-D. Dr. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, TALENCE (Gironde), France

a. Etude expérimentale de la morphogénèse de l'appareil génital. *(Anura)*
b. Evolution des cellules germinales. *(Anura)*
c. Etude de l'ultrastructure embryonnaire. *(Anura)*

GIRARD (DECHAMBE), Mrs. C. Dr. en Biol. anim. — Lab. de Biol. anim., Fac. des Sci., 351 Cours de la Libération, TALENCE (Gironde), France

a. Modalités et facteurs de formation de l'ostium. *(Anura)*
b. Etude expérimentale de la métamorphose de l'appareil excréteur. *(Anura)*
c. Culture in vitro d'organes embryonnaires. *Alytes obstetricans, Rana dalmatina (Anura)*

GIRARD, H. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Physiologie cardio-vasculaire (motricité) de l'embryon. *Gallus gallus (Aves)*

GIROUD, A. M.I.I.E., Prof. — Lab. d'Histol., Fac. de Méd., 45 Rue des Sts.Pères, PARIS VIe, France

a. Recherches sur l'influence tératogène des intoxications maternelles. *Mus rattus, Mus musculus, Cavia cobaya (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
b. Etude des cas tératologiques individuels. *Homo sapiens (Primates)*
c. Différenciation de l'épiderme. *Mus rattus (Rodentia)*
d. Mécanismes des abnormalités diverses, spécialement du système nerveux. *Mus rattus, M. musculus (Rodentia)*

GISLER (RIEMAN), Mrs. J. L. M.S. — Dept. of Biol. Sci., Univ. of Idaho, MOSCOW, Idaho 83844, U.S.A.

a. Morphology and histochemistry of bud morphogenesis in tissue culture; vascular stem explants. *Nicotiana tabacum (Solanaceae)*

GITLIN, G. B.Sc., Ph.D., M.B., Ch.B., Prof. — Dept. of Anat., The Hebrew Univ.-Hadassah Med. School, P.O.Box 1172, JERUSALEM, Israel

a. Regeneration of bone following limb amputation in young animals. *Mus norvegicus albinus (Rodentia)*
b. Effect of large doses of Vitamin A on the opening of the vaginal membrane. *Mus norvegicus albinus, Cavia porcellus (Rodentia)*

GIUDICE, G. M.D., Prof. — Ist. di Anat. comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia

a. Protein synthesis during early development. *Paracentrotus lividus (Echinoidea)*
b. Aggregation of cells isolated from embryos. *Paracentrotus lividus (Echinoidea)*

GLAS, P. M.Sc. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands

a. Development of the corpus callosum. *Mus musculus albinus (Rodentia)*

GLASS, Miss L. E. A.B., Ph.D. — Dept. of Anat., Univ. of California School of Med., SAN FRANCISCO 22, Calif., U.S.A.

a. Immunological, immuno-histological and electrophoretic studies on the inter-relation between maternal serum macromolecules, and oocyte or embryonic and fetal macromolecules of developmental significance. *(Mammalia)*

b. Use of transplantation techniques to study the development of eggs X-irradiated in vitro before fertilization and at various pre-implantation stages after fertilization. *(Mammalia)*

GLASSER, S. R. Ph.D., Prof. — Dept. of Obstetrics and Gynecol., Vanderbilt Univ. School of Med., NASHVILLE, Tenn. 37203, U.S.A.

a. Biochemical differentiation of endometrium. *(Mammalia), Homo sapiens (Primates)*

b. Biochemical and morphologic developments in implantation and placentation. *(Mammalia)*

c. Influence of ionizing radiation on growth and development. *(Mammalia)*

GLENISTER, T. W. M.B., B.S., D.Sc., Ph.D., M.I.I.E. — Dept. of Anat., Charing Cross Hosp. Med. School, 62-65 Chandos Place, LONDON W.C.2, England

a. Reaction of genital tract tissues to hormones in vitro. *(Mammalia)*

b. Study of blastocyst implantation in vitro. *(Mammalia)*

c. Behaviour of trophoblast in vitro. *(Mammalia)*

d. Development of embryos in vitro. *(Mammalia)*

e. Ultrastructure of embryo-maternal relationships during implantation. *(Mammalia)*

GLOOR, H. J. Ph.D., Prof. — Genet. Lab., Univ. of Leiden, Kaiserstr. 63, LEIDEN, Netherlands

a. Differentiation in imaginal discs. *Drosophila melanogaster (Diptera)*

GODET (NONNENMACHER), Mrs. J. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Etude autoradiographique du métabolisme des acides nucléiques. *Caenorhabditis elegans (Nematoda)*

b. La différenciation cellulaire dans le tissu sanguin. *Gallus domesticus (Aves)*

GODINA, G. Prof. — Ist. di Anat. degli Animali domestici con Istol. ed Embriol., Univ. di Torino, Via Nizza 52, TORINO, Italia

a. Origin of binucleate cells in cultures. *(Aves)*

b. Effect of subnormal temperatures on mitosis of cells cultured in vitro. *(Aves)*

c. Histogenesis and morphogenesis of cerebral cortex. *Cavia cobaya (Rodentia), Ovis aries (Artiodactyla)*

GOETINCK, P. F. B.S., Ph.D. — Dept. of Anim.Genet., Storrs Agric. Exp. Station, Univ. of Connecticut, STORRS, Conn., U.S.A.

a. Mesoderm-ectoderm interaction in differentiation (limb, scales and feathers). *Gallus domesticus (Aves)*

b. Ontogeny of the pituitary-thyroid axis. *Gallus domesticus (Aves)*

GOFF, R. A. B.S., M.S., Ph.D., Prof. — Dept. of Zool., Univ. of Oklahoma, NORMAN, Okla., U.S.A.

a. Analysis of the development of the appendicular skeleton by means of X-rays. *Gallus domesticus (Aves)*

GOLDBERG, E. Ph.D. — Dept. of Biol. Sci., Northwestern Univ., EVANSTON, Ill., U.S.A.

a. Physiology and biochemistry of germ cells. *(Mammalia)*
b. Enzymes in developing ova. *(Invertebrata)*
c. Proteins and enzymes in spermatozoa. *(Invertebrata, Mammalia)*

GOLDIE, M. B.S., A.M., Ph.D. — Dept. of Biol., Loyola Univ., 6525 North Sheridan Road, CHICAGO, Ill. 60626, U.S.A.

a. Morphogenesis of the tail. *Gallus domesticus (Aves)*
b. Histological analysis of the development of the rumpless phenocopy. *Gallus domesticus (Aves)*
c. Site of action of factors inducing the rumpless phenocopy. *Gallus domesticus (Aves)*
d. Effects of excess nutrients on early development in ovo and in vitro. *Gallus domesticus (Aves)*

GOLITCHENKOV, V. A. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

a. The relationship between cellular and subcellular components in radiation cataract. *Rana temporaria (Anura)*
b. Seasonal variation in lens sensitivity to radiation injury. *Rana temporaria (Anura)*

GOMEZ, A. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

GOMOT, L. Dr.ès Sci., Prof. — Lab. de Zool., Inst. des Sci. Nat., Place Maréchal Leclerc, BESANÇON, France

a. Développement embryonnaire de la glande uropygienne. *(Aves)*
b. Différenciation sexuelle des hybrides. *(Aves)*
c. Organogenèse de la glande mammaire. *Oryctolagus cuniculus (Lagomorpha)* (en collaboration avec A. PROPPER)
d. Recherches sur la différenciation de la glande hermaphrodite. *Helix aspersa (Pulmonata, Gastropoda)* (en collaboration avec A. GUYARD)

GONTCHAROFF, Miss M. Prof. — Lab. de Biol. génér., Fac. des Sci., B.P.347, REIMS (Marne), France

a. Regeneration. *Lineus ruber (Anopla, Nemertini)*
b. Analogues of DNA in embryonic development. *Strongylocentrotus purpuratus (Echinoidea)*

GOODRICH, H. B. B.S., M.A., Ph.D., D.Sc., Prof.(Emer.) — Shanklin Lab. of Biol., Wesleyan Univ.. MIDDLETOWN, Conn. U.S.A.

GORDON, H. P. B.S., D.D.S. — Dept. of Pathol., School of Dental Med., University of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

a. Ontogeny of myocardium. *Gallus domesticus (Aves)*

GOSS, R. J. A.B., A.M., Ph.D., Prof . — Dept. of Biol., Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.

a. Antler growth. *Cervus nippon (Cervidae, Artiodactyla)*
b. Compensatory renal hyperplasia. *Rattus* spec. *(Rodentia)*

GOSWAMI, M. N. D. B.Sc., M.Sc., Ph.D. — Cancer Res. Inst., New England Deaconess Hosp., 194 Pilgrim Rd., BOSTON 15, Mass., U.S.A. — temporarily: Lab. de Chim. Biol., Univ. de Paris, 96 Bld. Raspail, PARIS VIe, France

GÖSZWALD, K. Dr.phil., Dr.habil.rer.nat., Prof. — Inst. für Angewandte

Zool. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik
- a. Development. *(Formicinae*, esp. *Formica rufa* group, *Hymenoptera)*

GOTO, T. M.A., D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
- a. Studies on the purification of fluorescent substances and on their biological meaning. *(Amphibia)*
- b. Studies on the influence of pterin substances upon development. *Bombyx mori (Lepidoptera), Rana nigromaculata (Anura)*

GÖTTING, K. J. Dr.rer.nat. — Zool. Inst. der Univ., GIESSEN, Deutsche Bundesrepublik
- a. Electron microscopical investigations on oogenesis of marine forms. *(Teleostei)*

GOTTLIEB, G. A.B., M.S., Ph.D. — Psychol. Lab., Dorothea Dix Hospital, RALEIGH, N.C., U.S.A.
- a. Behavioral development of foetuses and embryos. *Anas platyrhynchos, Gallus gallus (Aves)*

GOTTSCHEWSKI, G. H. M. Dr.phil.habil., Prof. — Abt.f.Entw.physiol. der Haustiere, Max-Planck-Inst.f.Tierzucht u. Tierernährung, 3051 MARIENSEE, Deutsche Bundesrepublik
- a. Development of eye-cataract caused by a dominant gene in vitro. *Mus domesticus (Rodentia)*
- b. Uptake of viruses, bacteria, protein and antibodies in the early embryonal stages before placentation. *Oryctolagus cuniculus (Lagomorpha)*
- c. Phaenocritical periods of the different anlagen as determined by the effect of chemical substances on the blastocyst. *Oryctolagus cuniculus (Lagomorpha)*

GOUBE DE LAFOREST, P. Dr. en Méd. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
- a. Application des cultures d'organes in vitro à la culture des virus.
- b. Etude des relations virus-hôte en relation avec la différenciation cellulaire.

GOUIN, F. J. Dr.ès Sci. — Musée Zool. de l'Univ. et de la Ville, 29 Boulevard de la Victoire, F-67 STRASBOURG, France
- a. Descriptive and comparative embryology. *(Myriapoda; Insecta)*
- b. Review of all work in descriptive, comparative and/or experimental embryology. *(Myriapoda; Onychophora; Insecta)*

GOULD, Miss M. C. B.A., Ph.D. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif., U.S.A.
- a. Nucleic acid and protein metabolism during oogenesis and early development. *Urechis caupo (Echiuroidea)*

GOULD, R. P. B.Sc., M.Sc. — Anat. Dept., Middlesex Hosp. Med. School, LONDON W.1, England

GRABOWSKI, C. T. B.S., Ph.D., Prof. — Dept. of Biol., Univ. of Miami, CORAL GABLES, Fla., U.S.A.
- a. Teratological effects of hypoxia. *Gallus domesticus (Aves)*

b. Morphogenetic and biochemical analysis of effects of hypoxia on the embryo. *Gallus domesticus (Aves)*
c. Physiology of fluid and electrolyte balance in the early embryo and its relation to teratogenesis. *Gallus domesticus (Aves), Rattus norvegicus, Oryctolagus cuniculus (Mammalia)*

GRAHAM, C. F. B.A. — Dept. of Zool., Parks Rd., OXFORD, England
a. Experimental embryology.

GRANT, Ph. Ph.D., M.I.I.E. — Program Dir. for Developm. Biol., Natl. Science Foundation, WASHINGTON, D.C. 20550, U.S.A.
— summer only: Marine Biol. Lab., WOODS HOLE, Mass., U.S.A.
a. Role of neurosecretion in the regeneration and in the differentiation and ripening of the hermaphrodite genital apparatus. *Dugesia lugubris, D. tigrina, Polycelis nigra (Turbellaria)*

GRASSO, M. Dr. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
a. Nuclear transplantation in mosaic eggs. *Cerebratulus* spec. *(Nemertini)*

GRAU, C. R. B.S., Ph.D., Prof. — Dept. of Poultry Husbandry, Univ. of California, DAVIS, Calif., U.S.A.
a. Nutrition of embryos perfused through the yolk sac.
b. Oogenesis and yolk deposition.

GRAY, D. J. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Stanford Univ., STANFORD, Cal., U.S.A.
a. Prenatal development of bone. *Homo sapiens (Primates)*

GREEN, Ch. R. Ph.D., M.B., B.S., M.C.P.A., M.C.Path. — Dept. of Pathol., Univ. of Melbourne, PARKVILLE, N.2, Victoria, Australia
a. Morphological and biochemical analysis of maldevelopment induced experimentally by various procedures applied to embryos in ovo and explanted on culture media. *Gallus domesticus (Aves)*

GREEN, Mrs. E. UFFORD A.B., M.A., Ph.D. — Dept. of Biol., Haverford Coll., HAVERFORD, Pa., U.S.A.
a. Studies of mitotic and intermitotic times in embryos and tadpoles as related to age, to sizes of cells and nuclei and to the action of carcinogens. *Rana pipiens (Anura)*
b. Analysis of nucleic acid base composition in relation to development and differentiation. *Paramecium aurelia (Ciliata), Rana pipiens (Anura)*

GREEN, Mrs. M. C. Ph.D. — The Jackson Lab., BAR HARBOR, Me., U.S.A.
a. Developmental genetics. *Mus musculus (Rodentia)*

GREENFIELD, Miss M. L. B.Sc. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. An electron microscopical study of oogenesis in the fowl. *Gallus domesticus (Aves)* (in collaboration with Mrs. M. R. BELLAIRS)

GREGG, J. R. B.S., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.
a. Metabolism of normal animals and hybrids. *Rana pipiens, R. pipiens* ♀ x *R. sylvatica* ♂ *(Anura)*
b. Metabolism of normal and hybrid tissue-breis. *Rana pipiens, R. pipiens* ♀ x *R. sylvatica* ♂ *(Anura)*

GREIJ, E. D. — Dept. of Biol., Univ. of Ottawa, OTTAWA, Ontario, Canada

GRELL, K. G. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Hölderlinstr. 12, TÜBINGEN, Deutsche Bundesrepublik
  a. Entwicklung und Fortpflanzung. *Patellina corrugata (Rotaliidae, Foraminifera), Ophryotrocha puerilis (Eunicidae, Polychaeta), Haminea hydatis (Bullidae, Opisthobranchia)*

GRIGNON, G. Lic.ès Sci. — Lab. d'Histol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

GRILLO, T. A. I. M.I.I.E. — Dept. of Anat., Univ. of Ibadan, IBADAN, Nigeria

GROBSTEIN, C. Ph.D., M.I.I.E. — Dept. of Biol. Sci., Univ. of California at San Diego, LA JOLLA, Calif. 92038, U.S.A.
  a. Epithelio-mesenchymal relationships in pancreatic differentiation.
  b. The nature and behavior of interface materials in inductive systems.

GRODZINSKI, Z. Dr.Sci., M.I.I.E., Prof. — Dept. of Comp. Anat., ul. Krupnicza 50, KRAKÓW, Poland
  a. Influence of osmotic pressure upon the activity of the isolated embryonic heart (contraction rates). *Salmo trutta (Teleostei)*

GROENENDIJK (HUIJBERS), Mrs. M. M. M.D., D.Sc. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, the Netherlands
  a. Characteristics and source of the embryonic gonadal hormones, by means of embryonic castration and hormone treatment. *Gallus domesticus (Aves)*
  b. Interrelation between gonads and pituitary gland of the embryo. *Gallus domesticus (Aves)*

GROSCH, D. S. B.S., M.S., Ph.D. — Genetics Dept., North Carolina State Univ., 353 Gardner Hall, RALEIGH, N.C. 27607, U.S.A.
  a. Egg production and survival of embryos after mother has been fed enzyme inhibitors, antimetabolites and related compounds; without and with irradiation. *Habrobracon* spec. *(Hymenoptera)*

GRUCA, St. Mgr.biol. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
  a. The morphogenetic influence of estrogens. *Mus musculus (Rodentia)*
  b. The regeneration (transplantation) of the thyroid gland. *Cavia cobaya (Rodentia)*

GRÜNEBERG, H. Ph.D., M.D., D.Sc., F.R.S., M.I.I.E., Prof. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C. 1, England
  a. Developmental genetics of the axial and appendicular skeleton; effects of major genes. *Mus musculus (Rodentia)*
  b. Embryology of inherited syndactylism in cattle. *Bos taurus (Artiodactyla)*
  c. A search for effects in adult life due to genes which cause embryological abnormalities. *Mus musculus (Rodentia)*

GRUNER, J. E. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
  a. Maturation in the central nervous system, with special reference to the visual area and the motor nuclei of the myelencephalon (electron microscopy). *Oryctolagus cuniculus (Lagomorpha)* (in collaboration with P. J. J. ZAHND)

GUARDABASSI, Miss A. Dr.Nat.Sc., Prof. — Ist. di Embriol. sperim., Via Giolitti 34, TORINO, Italia

a. Utilization of Ca salts of the larval endolymphatic sac in the mineralization of skeletal segments in vitro. *Bufo bufo (Anura)*

GUERRIER, P. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Etude microcinématographique du développement. *(Nematoda; Spiralia)*

GUIRAO-PEREZ, M. Med.Dr., Prof. — Inst.F.Olóriz, Fac. of Med., Univ. of Granada, GRANADA, Spain

a. Fetal developmental features and congenital prenatal and neonatal morphofunctional disturbances (macro- and microscopical). *Homo sapiens (Primates)*

b. Normal fetal developmental patterns: measures, histological structures, histochemical selective methods, systematic necropsies, etc. *Gallus domesticus (Aves), Homo sapiens (Primates)*

GULLINE Miss H. F. B.Sc.(Hons.) — Biophysics Lab., Univ. of Tasmania, HOBART, Tasmania, Australia

GUNTER, G. Dr. — Gulf Coast Research Lab., OCEAN SPRINGS, Miss., U.S.A.

GURAYA, S. S. M.Sc. (Hons.), Ph.D. — Dept. of Zool., Panjab Univ., CHANDIGARH, India

a. Comparative histochemical studies on the developing oocytes and their follicle cells (lipids, carbohydrates, nucleic acids and proteins). Various spp. *(Acrania; Anura; Marsupialia; Rodentia; Chiroptera; Primates), Homo sapiens (Primates)*

GURDON, J. B. M.A., D.Phil. — Dept. of Zool., Parks Rd., OXFORD, England

a. Experimental embryology, especially nuclear transplantation. *Xenopus* spp. *(Anura)*

GUSTAFSON, T. Fil.Dr., M.I.I.E., Prof. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. Morphogenetic movements. *(Echinoidea)*

b. Enzyme induction and repression in cell cultures.

GUTIERREZ, M. Dr. — Departamento de Anat., Catedra de Anat. II, Fac. de Med., CADIZ, Spain

— private address: Calle Valverde 20, CADIZ, Spain

a. Embryological development of blood cells. *Gallus gallus (Aves)*

GUYARD, A. Lic.ès Sci. — Lab. de Zool., Inst. des Sci.Nat., Place Maréchal Leclerc, BESANÇON, France

a. Recherches sur la différenciation de la glande hermaphrodite. *Helix aspersa (Pulmonata, Gastropoda)* (en collaboration avec L. GOMOT)

GWATKIN, R. B. L. M.A., Ph.D., — King Ranch Lab. of Reprod. Physiol., School of Veter. Med., Univ. of Pennsylvania, 25th and Locust Streets, PHILADELPHIA 4, Pa., U.S.A.

a. Effect of viruses on early development and their role as a cause of birth defects. *(Mammalia)*

GYÉVAI (TÓTH), Mrs. A. T. — Inst. of Exp.Med. of the Hung. Acad. of Sci., Morphol. Dept., Szigony u.43, BUDAPEST VIII, Hungary

a. Comparative investigations on the conducting system of the embryonic heart. Various spp. *(Vertebrata)*

b. Changes in the electrophysiological properties of the heart muscle fibres during ontogeny. Various spp. *(Vertebrata)*

GYLLENSTEN, L. J. W. Med.Dr. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden
  a. Regeneration, differentiation and growth of the lymphatic system. *Cavia cobaya (Rodentia)*
  b. Physiological factors in the postnatal development of the visual system. *Mus musculus (Rodentia)*

HACCIUS, Miss B. Dr., Prof. — Inst. für spezielle Botanik, Univ. Mainz, 65 MAINZ, Deutsche Bundesrepublik
  a. Beeinflussung der Entwicklung von Embryonen durch Chemikalien (Wachtstumsregulatoren; Antimitotica; Radiomimetica und Röntgenstrahlen). *Eranthis hiemalis (Ranunculaceae)*
  b. In vitro Kultur von Embryonen und Geweben. *(Plantae)*

HADORN, E. Dr.Phil., M.I.I.E., Prof. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

HAGELIN, L. O. Fil.lic. — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden
  a. Development of labyrinth organ. *Petromyzon* spec. *(Cyclostomata)*

HAGET, A. Dr.ès Sci., M.I.I.E., Prof. — Lab. de Zool. expér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France
  a. Analyse expérimentale de la morphogénèse embryonnaire de la tête. *Leptinotarsa* spec. *(Coleoptera)*
  b. Rôle du système nerveux dans la morphogénèse embryonnaire des pattes. *Leptinotarsa* spec. *(Coleoptera)*
  c. Recherches sur l'édification de la blastule et de la gastrule. *Leptinotarsa* spec. *(Coleoptera)*

HAGIWARA, A. D.Sc. — Lab. of Developmental Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan
  a. Mechanisms of antibody formation. *Rattus* spec. *(Rodentia)*

HAGSTRÖM, B. E. Fil.Dr. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

HALE, L. J. Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland
  a. Cell behaviour during growth and morphogenesis. *(Hydrozoa)*

HALFER, Miss C. — Ist. di Genet., Univ. di Milano, Via Celoria 10, MILANO, Italia
  a. Ovary transplantation. *Drosophila* spec. *(Diptera)*

HAM, R. G. B.S., Ph.D. — Dept. of Biol., Univ. of Colorado, BOULDER, Colo., U.S.A.
  a. Differentiation of cells in vitro. *Cricetulus griseus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
  b. Culture media for freshly isolated cells during differentiation. *Oryctolagus cuniculus (Lagomorpha)*

HAMA, T. M.A., D.Sc., M.I.I.E., Prof. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
  a. Morphogenetical and chemical analysis of the organizer. *Triturus pyrrhogaster (Urodela)*
  b. Studies on the influence of the pterins and their like upon development in various animals. *(Arthropoda; Pisces; Amphibia;* etc.)
  c. Developmental and chemical studies of the chromatophores. *(Pisces; Amphibia)*

HAMANO, S. M.Sc., D.Sc. — Lab. of Physiol. & Ecol., Dept. of Biol., Fac. of Fisheries, Hokkaido Univ., HAKODATE, Japan
  a. Physico-chemical studies on activation and fertilization. *(Teleostei)*
  b. Study of phospholipid metabolism during development using P^{32}. *Salmo irideus (Teleostei)*
  c. On the sperm agglutinating agents of eggs. *Oncorhynchus keta, Salmo irideus (Teleostei)*
  d. Cellular basis of morphogenesis during gastrulation. *Brachydanio rerio (Teleostei)*

HAMBURGER, K. Cand.mag. — Biol. Inst. of the Carlsberg Foundation, 16 Tagensvej, COPENHAGEN N, Denmark

HAMBURGER, V. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.
  a. Neuro-embryology and behavior. *Gallus domesticus (Aves)*

HAMILTON, H. L. B.A., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va., U.S.A.
  a. Studies on the relation of enzyme systems to morphogenesis. *Gallus domesticus (Aves)*
  b. Factors influencing the differentiation of melanophores in tissue cultures. *Gallus domesticus (Aves)*
  c. Effects of rare earths on development. *Gallus domesticus (Aves)*

HAMILTON, Miss L. B.A., Ph.D. — Dept. of Biol. as applied to Med., Middlesex Hosp. Med. School, LONDON W.1, England
  a. Analysis of haploid syndrome. *Xenopus* spp. *(Anura)*
  b. Morphogenetic effects of homologous DNA. *Ambystoma mexicanum (Urodela)*
  c. Radiation sensitivity of haploid and diploid embryos. *Xenopus laevis (Anura)*

HAMILTON, W. J. M.I.I.E., Prof. — Dept. of Anat., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C.2, England
  a. The development and structure of the placenta. *Homo sapiens (Primates)* (in collaboration with J. D. BOYD, Cambridge)

HÄMMERLING, J. Dr.phil., M.I.I.E., Prof. — Max Planck Inst.f. Meeresbiol., Anton Dohrn Weg, 2940 WILHELMSHAVEN, Deutsche Bundesrepublik
  a. Nucleo-cytoplasmic relationships in unicellular algae, reticulocytes and other cell types.

HAMMOND, W. S. Ph.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.
  a. Development of the visceral skeleton. *Gallus domesticus (Aves)* (in collaboration with C. L. YNTEMA)
  b. Origin of tongue musculature. *Gallus domesticus (Aves)*

HAMMOUDA, E. I. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt
  a. The effect of some cytotoxic substances on the developing embryo. *Gallus domesticus (Aves)*

HAMNER, Ch. D.V.M., Ph.D. — Vivarium, School of Med., Univ. of Virginia, P.O.Box 261, CHARLOTTESVILLE, Va. 22901, U.S.A.

a. The composition of oviduct secretions of ovariectomized females with and without estrogen and progesterone injections and the effects of these secretions on sperm metabolism and fertilizing ability. *Oryctolagus cuniculus (Lagomorpha)*

HANAOKA, K. I. D.Sc., Prof. — Dept. of Comp. Endocrinol., Inst. of Endocrinol., Gunma Univ., Showa-Machi, MAEBASHI, Japan

a. Modification of adult sex by transplantation of gonads. *Triturus pyrrhogaster (Urodela), Xenopus laevis (Anura)*

b. Effect of gonad extract on sex differentiation of the gonad, with special reference to the nature of the sex inductor substances. *Triturus pyrrhogaster (Urodela)*

HANAOKA, Y. M.Sc. — Zool. Inst., Fac. of Science, Hokkaido Univ., SAPPORO, Japan

— temporarily: Dept. of Comp. Endocrinol., Inst. of Endocrinol., Gunma Univ., Showa-Machi, MAEBASHI, Japan

a. Experimental physiology of metamorphosis. *Rana* spp., *Xenopus laevis (Anura)*

HANAWAY, J. B.A., M.D. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.

a. Morphological and immunochemical investigation of the developing cerebrum and cerebellum in the "reeler" (rl) mutant. *Mus musculus (Rodentia)*

HANCOCK, J. L. M.V.Sc., Ph.D., M.R.C.V.S. — A.R.C. Animal Breeding Research Organization, King's Buildings, West Mains Rd., EDINBURGH 9, Scotland

a. Intergeneric hybrids. *Capra hircus* x *Ovis aries (Artiodactyla)*

b. Fertilization (experimental studies). *Sus scrofa, Ovis aries (Artiodactyla)*

HANKE, W. Dr., Prof. — Zool. Inst. der Univ., Siesmayerstr. 70, FRANKFURT/Main, Deutsche Bundesrepublik

a. Wechselwirkungen zwischen Corium und Epidermis an der Haut. *Rana temporaria (Anura), Mus musculus (Rodentia)*

b. Auslösung der Häutung mit Hormonen. *Rana temporaria (Anura)*

c. Morphogenesen in Organkultur: 1) Verhalten von Haut, 2) Verhalten von endokrinen Organen. *Xenopus laevis (Anura), Mus musculus (Rodentia)*

d. Funktionelle Veränderungen an der Nebennierenrinde. *Rana temporaria (Anura)*

HANSEN, A. M. A.S., B.S., M.S., Ph.D. — Div. of Agric. and Life Sciences, Snow College, EPHRAIM, Utah, U.S.A.

(no embryological work in progress)

HANSEN (DELKESKAMP), Mrs. E. — Zool. Inst. der Univ., Physiol. Lehrstuhl, Berliner Str., HEIDELBERG, Deutsche Bundesrepublik

a. Metabolism of eggs and embryos. *Gryllus domesticus (Orthoptera)*

HANSON, E. D. A.B., Ph.D. — Shanklin Lab. of Biol. Wesleyan Univ., MIDDLETOWN, Conn., U.S.A.

HARA, K. Ph.D. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a. Neural induction: medio-lateral distribution of the inductive capacities in the mesoderm, as studied by intracoelomic grafting. *Gallus domesticus (Aves)*

b. Temporal aspects in the process of neural induction by the young head process. *Gallus domesticus (Aves)*

HARKMARK, W. Dr.med., Prof. — Anat. Inst., Univ. of Bergen, BERGEN, Aarstadvollen, Norway

a. The histogenesis of the cerebellum with special emphasis on the Purkinje cells. *Gallus domesticus (Aves)*

b. The development of the hippocampus. *Mus rattus (Rodentia), Balaenoptera physalus (Cetacea)*

HARPER, M. J. K. M.A.Dip.Agric., Ph.D. — Pharmaceutical Div., Imp. Chem. Industr. Ltd., Alderley Park, MACCLESFIELD, Cheshire, England

a. Ovum transport through the reproductive tract. *Oryctolagus cuniculus (Lagomorpha), Rattus rattus (Rodentia)*

b. Ovum development and implantation. *Mesocricetus auratus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

c. Prenatal mortality studies. *Rattus rattus (Rodentia)*

d. Effects of chemical compounds on pregnancy. *Oryctolagus cuniculus (Lagomorpha), Rattus rattus, Mus musculus, Mesocricetus auratus (Rodentia)*

HARREBOMÉE, Mrs. A. E. Med.drs. — Div. of exper.Morphol., Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands

a. Regeneration blastemata induced in heterotopic positions and their development. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

b. Differentiation and de-differentiation during regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

HARRIS, F. T. C. M.Sc. — Dept. of Biol. as applied to Med., Middlesex Hosp. Med. School, LONDON W.1, England

HARRIS, J. W. S. M.B., B.S., Ph.D. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E.1, England

a. Morphological development of secondary palate. *Rattus* spec., *Mus* spec. *(Rodentia)*

b. Placental vascular pattern. *Homo sapiens (Primates)*

c. Development of trabecular portion of cranial base. *Rattus* spec. *(Rodentia)*

HARRIS, M. Ph D., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Calif., U.S.A.

a. Tissue culture: protein growth factors; evolution of chromosome patterns; drug resistance. *Sus domestica (Artiodactyla)*

b. Thermotolerance of kidney cells in vitro. *Sus domestica (Artiodactyla)*

c. Morphogenesis in cultures of kidney cells. *Rana pipiens (Anura)*

HARRISON, J. R. B.A., M.A., Ph.D., Prof. — Dept. of Biol., Washington and Jefferson Coll., WASHINGTON, Pa., U.S.A.

a. In vitro studies on the growth and differentiation of the retinal pigment in the embryonic eye: analysis of developmental factors contained in the yolk-albumen of the egg. *Gallus domesticus (Aves)*

b. Uptake of glucose by early primitive streak to early somite embryos studied by using isotope techniques. *Gallus domesticus (Aves)*

HARRISON, R. G. M.A., D.M. — Dept. of Anat., Univ. of Liverpool, LIVERPOOL 3, England
 a. Factors influencing the process of spermatogenesis. *(Mammalia)*

HARRISON, R. J. M.A., D.Sc., M.D. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E.1, England
 a. Fine structure of the placenta. *(Mammalia)*
 b. Structure of ovary in delayed implantation. *(Carnivora)*
 c. Placentation and changes in reproductive tract. *(Cervidae; Phocidae)*

HART, N. H. A.B., M.A., Ph.D. — Dept. of Biol., Union Coll., SCHENECTADY, N.Y. 12308, U.S.A.
 a. Variation in the patterns of septogenesis in the bulbus cordis. *Aristelliger praesignis (Lacertilia), Chrysemys marginata (Chelonia)*
 b. The role of haemodynamics in growth and differentiation of the heart (microclip technique). *Gallus* spec. *(Aves)*

HARTE, Miss C. Dr., Prof. — Inst. für Entw.physiol., Univ. zu Köln, Gyrhofstr. 17, KÖLN-Lindenthal, Deutsche Bundesrepublik
 a. Influence of genes on pollentube growth (certation) and embryosac development. *Oenothera* spec. *(Onagraceae), Antirrhinum* spec. *(Scrophulariaceae)*
 b. Gene action in the development of leaves. *Antirrhinum* spec. *(Scrophulariaceae)*

HARTWIG, H. Dr.Phil., Doz. — Zool. Inst. der Univ. Köln, Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik
 a. Wirkungsmechanismus von Schilddrüsenhormonen.
 b. Epidermoidcysten.
 c. Geweihbildung. *Capreolus capreolus (Artiodactyla)*

HARVEY, Mrs. E. BROWNE A.B., M.A., Ph.D., Sc.D., M.I.I.E(Emer.) —c/o Marine Biol. Lab., WOODS HOLE, Mass. 02543, U.S.A.

HASEGAWA, M. D.Sc. — Embryol. Div., Dept. of Anim. Sci., Fac. of Agric., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
 a. Restitution of the eye after removal of the retina and lens. *(Teleostei)*
 b. Regeneration of the liver. *Gallus domesticus (Aves)*

HAŠEK, M. M.D., M.I.I.E. — Dept. of Exper. Biol. and Genet., Inst. of Biol., Czechoslovak Acad. of Sci., Flemmingovo nám.2, PRAHA 6, Czechoslovakia

HASHIMOTO, K. M.D. — Dept. of Dermatol., Boston Dispensary, 25 Bennet Street, BOSTON, Mass. 02111, U.S.A.
 a. Electron microscopic studies of embryonic hair. *Homo sapiens (Primates)*
 b. Electron microscopic studies of the embryonic sebaceous gland. *Homo sapiens (Primates)*

HASHIMOTO, K. D.Sc. — Biol. Lab., Kozu High School, Tennoji-ku, OSAKA, Japan
 a. Mechanism of morphogenesis. *Oxytricha fallax (Ciliata)*
 b. Stomatogenesis. *Colpoda* spec., *Woodruffia* spec., *Tillina* spec. *(Colpodidae, Ciliata)*

HASLAUER, J. Ph.D. — Zool. Inst., Univ. of Innsbruck, INNSBRUCK, Austria
 a. Influence of vitamins, pharmaca and antimetabolites on regenerative growth. *Euplanaria gonocephala, Dendrocoelum lacteum (Turbellaria)*

HASSMANNOVÁ, Miss J. M.D., C.Sc. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEN, Czechoslovakia
  a. The development of the diencephalocortical portion of the auditory pathway (electrophysiological methods). *Rattus norvegicus (Rodentia), Felis domestica (Carnivora)*

HATFIELD (ANGELL), Mrs. P. M.S. — Marine Research Laboratory, Univ. of Connecticut, NOANK, Conn., U.S.A.
  a. Descriptive morphology of a commensal form from the fertilized egg through late pelagic stages. *Polydora commensalis (Sedentaria, Polychaeta)*

HAUENSCHILD, C. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Katharinenstr. 20, FREIBURG i.Brsg., Deutsche Bundesrepublik
  a. Lunarperiodizität und Endocrinologie der Entwicklung. *Platynereis dumerilii* and other spp *(Polychaeta)*

HAUSCHTECK, Miss E. Dr.rer.nat. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

HAWKINS, A. D. B.Sc. — Dept. of Zool., Univ. of Bristol, BRISTOL 8, England
  a. Physiology, including developmental physiology, of noise-making forms. *(Pisces)*

HAY, Miss E. D. A.B., M.D., M.I.I.E. — Dept. of Anat., Harvard Med. School, BOSTON 15, Mass., U.S.A.

HAYASHI, H. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
  a. Functional properties of yolk platelet proteins in primary embryonic induction *Rana japonica, R. nigromaculata, (Anura), Triturus* spec. *(Urodela)*
  b. Ribosomal proteins and nucleic acids. Inductive effect of complex between ribosomal proteins and RNA or acidic proteins. *Rana japonica, R. nigromaculata (Anura), Triturus pyrrhogaster (Urodela), (Mammalia)*

HAYASHI, I. M.D., Prof. — Pathol. Dept., Nagasaki Univ. School of Med., 93 Sakamoto-machi, NAGASAKI, Japan
  a. Pathological investigations on the interrelationships between developmental anomalies and hormonal disorders. *Rattus* spec. *(Rodentia), Homo sapiens (Primates)*
  b. Cytochemical observations on the specificity of the effects of adrenocortical hormones upon development and differentiation of the germ layer cells (microspectrophotometry and autoradiography). *Rattus* spec. *(Rodentia)*

HAYASHI, Y. D.Sc., M.I.I.E. — Zool. Inst., Tokyo Kyoiku Univ., 24 Otsuka-Kubomachi, Bunkyo-ku, TOKYO, Japan
  a. Analysis of epithelio-mesenchymal interaction in the formation of the beak. *Gallus* spec. *(Aves)*
  b. Biochemical analysis of muscle differentiation. *Triturus pyrrhogaster (Urodela), Gallus* spec. *(Aves)*

HAYEK, H. Dr.med., Dr.phil., M.I.I.E., Prof. — Anat. Inst., Währingerstr. 13, WIEN 9, Oesterreich

HAYNES, J. F. B.A., Ph.D. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind., U.S.A.

a. Growth and form regulation. *Hydra viridis (Hydroidea)*
b. Embryology. *(Invertebrata)*

HEATH, H. D. Ph.D. — Dept. of Biol. Sci., California State Coll., HAYWARD, Calif., U.S.A.
a. Growth of larvally transplanted organs. *Ambystoma tigrinum (Urodela)*
b. Developmental phenomena. *Hydra littoralis (Hydroidea)*

HEAYSMAN, Mrs. J. E. M. WAKELING B.Sc., Ph.D. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. Study of cell relations in tissue culture. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with M. ABERCROMBIE)

HEBARD, Miss C. N. A.B. — Dept. of Biol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a. Structure of cortical cytoplasm before and after fertilization and in early cleavage. *Xenopus laevis (Anura)*

HECKERMAN, R. O. B.S., M.S., Ph.D., Prof. — Dept. of Biol. Sci., Quincy Coll., QUINCY, Ill., U.S.A.

HEGGESTAD, C. B. M.D., Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
a. Morphological and physiological effects of maternal endocrine deficiency: experimental diabetes mellitus. *Rattus norvegicus (Rodentia)*

HEIM, W. G. A.B., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Biol., Wayne State Univ., DETROIT, Mich. 48202, U.S.A.
a. Serum proteins during ontogeny. *Gallus domesticus (Aves), Mus rattus (Rodentia)*
b. Alpha-2 macroglobulin during development, regeneration, and various physiological states. *Mus rattus (Rodentia)*

HEINEMANN, F. Ph.D. — Dept. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, BERN, Switzerland
a. Primary effects of thyroxine on larval tails. *Xenopus laevis (Anura)* (in collaboration with R. WEBER)

HEIZMANN, P. Ing.Chim. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France
a. Métabolisme des acides nucléiques. *Euglena gracilis (Flagellata)*

HELFENBEIN, L. L. B.Sc. — Dept. of Biol., Kharkov State Univ., Dzerjinsky Square 4, KHARKOV, U.S.S.R.
a. Investigations on the history of embryology. (particularly *Invertebrata)*

HEMMINGS, W. A. B.A., D.Sc. — A.R.C. Unit of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
a. Immunological relations of mother and fetus. *(Mammalia)*

HEMPEL, G. Dr. — Inst. für Hydrobiol. und Fischereiwiss., Univ. Hamburg, Olbersweg 24, 2 HAMBURG-Altona 1, Deutsche Bundesrepublik

HENDRICKX, A. G. B.A., M.S., Ph.D. — Southwest Foundation for Research and Education, P.O.Box 2296, 10,000 West Commerce, SAN ANTONIO, Tex., U.S.A.
a. Descriptive morphology of the embryo (second week through fourth month). *Papio* spec. *(Primates)*
b. Determination of ovulation time. *Papio* spec. *(Primates)*

HENLEY, Miss C. M.A., Ph.D., — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.

a. Studies in experimental cytology. *Polychoerus* spec. *(Acoela, Turbellaria), Chaetopterus pergamentaceus (Polychaeta)* (in collaboration with D. P. COSTELLO)
b. Effects of antimitotic agents on eggs. *Chaetopterus pergamentaceus (Polychaeta), Asterias forbesii (Asteroidea)* (in collaboration with D. P. COSTELLO)

HENNEN, Miss S. Ph.D. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.
a. Interspecific transfer of embryonic nuclei. *Rana pipiens, R. palustris, R. sylvatica (Anura)*
b. Chromosome analysis of nuclear transplant embryos. *R. pipiens, R. palustris, R. sylvatica (Anura), Ambystoma mexicanum (Urodela)*

HERLANT (MEEWIS), Mrs. H. Dr. en Sci. Zool., Prof. — Lab. de Zool. syst. et de Biol. anim., Fac. des Sci., Univ. libre de Bruxelles, 50 Avenue F. D. Roosevelt, BRUXELLES, Belgique
a. Endocrinology and growth. *Eisenia foetida (Oligochaeta), Nereis diversicolor (Polychaeta)*
b. Reproduction and regeneration. *Eisenia foetida (Oligochaeta), Nereis diversicolor (Polychaeta)*

HEROLD, R. C. B.S., M.S., Ph.D. — Dept. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, 4001 Spruce St., PHILADELPHIA, Pa. 19104, U.S.A.
a. Developmental study of flight muscle mitochondria structure and function (biochemistry and electron microscopy). *Apis mellifera (Hymenoptera)*
b. Development of embryonic fine structure, mitochondria and cell membrane; effect of chemical treatments. *Echinarachnius parma (Scutellidae, Exocyclica, Echinoidea)*

HERRMANN, H. M.D., M.I.I.E., Prof. — Inst. of Cellular Biol., Dept. of Zool., Univ. of Connecticut, STORRS, Conn., U.S.A.

HERZBERG, F. B.S., D.D.S., M.S. — Dept. of Anat., Center for the Health Sciences, the Univ. of California, LOS ANGELES 24, Calif., U.S.A.
a. Effects of massive doses of ionizing radiation on growth and reproduction. *Helix aspersa (Pulmonata, Gastropoda)*

HESS, O. Dr.rer.nat. — Max Planck Inst. für Biol., Spemannstr. 34, TÜBINGEN, Württemberg, Deutsche Bundesrepublik
a. Experimental embryology. *(Mollusca)*
b. Developmental physiology. *(Mollusca)*
c. Gene function and differentiation of male germ cells, cytogenetics. *Drosophila* spp. *(Diptera)*

HESSELSJÖ, R. Med.lic. — Dept. of Anat., Univ. of Gothenburg, GÖTEBORG-SV, Sweden

HEUSER, C. H. M.I.I.E., Prof. — Eugene Talmadge Memorial Hosp., Med. Coll. of Georgia, AUGUSTA, Ga., U.S.A.

HEWITT, W. M.B., B.S. — Dept. of Anat., St. Thomas's Hosp. Med. School, LONDON S.E.1, England
a. Development of the brain. *Homo sapiens* and other spp. *(Mammalia)*

HEYN, A. N. J. Prof. — Dep. of Biol., Louisiana State Univ. in New Orleans, Lake Front, NEW ORLEANS, La. 70122, U.S.A.
a. Egg shell formation and structure. *Gallus domesticus (Aves)*

HICKS, S. P. B.A., M.D., Prof. — Dept. of Pathol., Med. School, Univ. of Michigan, 1335 E. Catherine St., ANN ARBOR, Mich. 48104, U.S.A.

HILFER, S. R. B.S., M.A., Ph.D. — Dept. of Biol., Temple Univ., Broad and Berks St., PHILADELPHIA, Pa. 19122, U.S.A.
- a. Effect of pituitary extirpation on reamputation and regeneration of regenerating limbs. *Triturus viridescens (Urodela)*
- b. Stability of dissociated embryonic thyroid cells as measured by morphological and chemical criteria of differentiation. *Gallus domesticus (Aves)*
- c. Electron microscopy of differentiating thyroid cells. *Gallus domesticus (Aves)*

HILLMAN, Mrs. N. WILLIAMS A.B., A.M., Ph.D. — Dept. of Biol., Temple Univ., Broad and Berks St., PHILADELPHIA, Pa. 19122, U.S.A.
- a. The effects of nucleic acids on the cephalogenesis of both normal and mutant embryos. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

HINCHLIFFE, J. R. B.A. — Wye Coll., Near ASHFORD, Kent, England
- a. Developmental pathology of talpid 3 mutant with particular respect to role of cell death in limb development, and mesenchymal condensations of the limb skeleton. *Gallus domesticus (Aves)*
- b. Experimental and histochemical studies on talpid 3 membrane- and cartilage-replacement, bone formation, and on feather development. *Gallus domesticus (Aves)*
- c. Histochemical and experimental studies on blastocyst implantation. *Mus musculus (Rodentia)*

HINRICHSEN, K. Dr.med., Prof. — Anat. Inst. der Univ., Österbergstr. 3, 74 TÜBINGEN, Deutsche Bundesrepublik

HIRAIWA, Y. K. D.Sc., Prof. — Seinan Gakuin Univ., FUKUOKA, Japan
- a. Autoradiographische Untersuchungen zur Lymphopoese. *Mus musculus (Rodentia)*
- b. Histochemie der histogenetischen Differenzierung *Mus musculus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

HINTON, H. E. Ph.D., Sc.D., F.R.S., Prof. — Dept. of Zool., Univ. of Bristol, BRISTOL, England
- a. Metamorphosis of the colour pattern. *(Simuliidae, Diptera)*
- b. Development, structure and function of spiracular gills. *(Insecta)*
- c. Respiratory systems of eggs. *(Insecta)*
- d. Cryptobiosis. *(Insecta)*

HIRAKOW, R. D.Med.Sc. — Dept. of Anat., School of Med., Tokyo Med. and Dental Univ., Yushima, Bunkyo-ku, TOKYO, Japan
- a. Fine structural study of the differentiation of the conducting tissue of the heart. *Gallus gallus (Aves)*
- b. Experimental study of heart morphogenesis. *(Urodela)*

HIRAMOTO, Y. D.Sc., M.I.I.E., Prof. — Misaki Marine Biol. Station, Univ. of Tokyo, MISAKI, Kanagawa-ken, Japan
- a. Cell division. *(Echinoidea)*
- b. Physical properties of marine eggs. *(Echinoidea)*
- c. Physiological studies on fertilization. *(Echinoidea)*

HIRANO, C. Ph.D. — Div. of Entomol., Natl. Inst. of Agric. Sciences, Nishigahara, Kita-ku, TOKYO, Japan

a. Metabolism of purine derivatives during metamorphosis. *Chilo suppressalis, Bombyx mori (Lepidoptera)*

HISAOKA, K. K. B.Sc., M.Sc., Ph.D. — Res. Grants Sect., NIDR, Natl. Insts. of Health, BETHESDA, Md. 20014, U.S.A.
(no embryological work in progress)

HISHIDA, T. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
a. Metabolic analysis of early development. *Oryzias latipes (Teleostei)*
b. Physiological study of sex differentiation. *Oryzias latipes (Teleostei)*

HITZEMAN, Sister J. W. Ph.D. — Div. of Nat.Sci., Siena Heights Coll., ADRIAN, Mich., U.S.A.
a. Distribution and activity of enzymes associated with metabolism and steroidogenesis in the Leydig cells of the testis. *Mus musculus (Rodentia)*

HOADLEY, L. A.B., A.M.(Hons.), Ph.D., M.I.I.E., Prof.(Emer.) — Biol. Lab., Harvard Univ., Divinity Ave., CAMBRIDGE 38, Mass., U.S.A.

HOAR, R. M., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Cincinnati, Eden Avenue, CINCINNATI 19, Ohio, U.S.A.
a. Study of the teratogenic effects of the reproductive endocrines with particular reference to the adrenocorticoids. *Cavia cobaya (Rodentia)*

HOBBS, M. J. B.A. — Dept. of Zool., King's Coll. London, Strand, LONDON W. C. 2, England
a. Differentiation in colonial forms. *Pleodorina* spp. *(Volvocaceae, Algae)*

HOEFSMIT, Miss E. C. M. Med.Drs. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands

HOFMAN, Miss L. M.Sc. — Inst. of Biol., Fac. of Med., ZAGREB, Šalata, Yugoslavia
a. Relative growth of organs in the embryo. *Rattus norvegicus albinus (Rodentia)* (in collaboration with N. ŠKREB)

HOHL, H. R. Ph.D. — Pacific Biomedical Research Center, 2538 the Mall, Univ. of Hawaii, HONOLULU, Hawaii 96822, U.S.A.
a. Submicroscopic morphogenesis. *Dictyostelium discoideum (Acrasiales)*

HOLLANDER, W. F. B.A., M.S., Ph.D. — Dept. of Genet., Iowa State Univ., AMES, Iowa, U.S.A.

HOLM, K. Å. Fil.Dr. — Zool. Inst., Univ. of Uppsala, UPPSALA,
a. Experimental investigation of the embryo (Determination, prospective significance of embryonic areas). *(Araneae, Arachnoidea)*

HOLSTEIN, A.-F. Dr.med. — Anat. Inst. der Univ., Univ.-Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutsche Bundesrepublik
a. Elektronenmikroskopische Untersuchungen am Spermatozoon. *Didelphys virginiana (Marsupialia)*
b. Untersuchungen zur Funktion des Nebenhodens. *(Mammalia)*

HOLTER, H. Ph.D., M.I.I.E. — Dept. of Physiol., Carlsberg Lab., 10 Gl. Carlsbergvej, COPENHAGEN, Valby, Denmark

HOLTFRETER, J. K. F. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A.
a. Embryological-cytological studies on muscle development. *(Vertebrata)*
b. Comparative studies on the locomotion and streaming of embryonic and other amoeboid cells. *(Vertebrata)*

HOLTZER, H. Ph.D., M.I.I.E., Prof. — Dept of Anat, School of Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

HOMANN, H. Dr.rer.nat. — I. Physikalisches Inst., Univ. Göttingen, Stegemühlenweg 61, 34 GÖTTINGEN, Deutsche Bundesrepublik
a. Development of eyes. *(Oxyopidae, Ctenidae, Zoropsidae, Agelenidae, Dysderidae, Philodromidae, Araneae, Arachnoidea)*

† HOOKER, D. Ph.D., Sc.D.(Hon.), M.I.I.E., Prof.(Emer.) — 130 Everit St., NEW HAVEN 11, Conn., U.S.A.
(deceased)

HORI, R. M.Sc., D.Sc. — Biol. Inst., Fac. of Lib. Arts, Toyama Univ., Gofuku 3190, TOYAMA, Japan
a. Sodium and potassium content, ionic permeability and fertilization phenomena (radioisotope studies). *Hemicentrotus pulcherrimus (Echinoidea), Oryzias latipes (Teleostei)*

HORIKAWA, M. D.Sc. — Dept. of Genet., Univ. of Wisconsin, MADISON, Wis. 53706, U.S.A.
a. Developmental-genetic studies of embryonic cells in vitro: enzyme induction and organ formation. *Drosophila melanogaster (Diptera)*

HORKÝ, Z. M.D. — Inst. für Diabetes, 2201 KARLSBURG/Greifswald, Deutsche Bundesrepublik
a. Measuring of the basal membrane in diabetic placenta (electron microscopy). *Homo sapiens (Primates)*
b. Morphological study of villi at term in diabetic placenta. *Homo sapiens (Primates)*

HORN, E. C. B.S., A.M., Ph.D., Prof. — Dept. of Zool., Duke Univ., DURHAM, N.C. 27706, U.S.A.
a. The pattern of basic protein distribution during early embryonic development. *(Amphibia)*
b. Isolation and characterization of cytoplasmic histones in embryonic cells. *(Amphibia)*
c. Hemolymph protein changes and carotenoid pigment distribution during the reproductive cycle. *Callinectes sapidus (Decapoda, Crustacea)*

HORNBY, Miss J. E. B.Sc. (Sp.) — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. Biophysical properties of the surface of embryonic cells. *(Aves; Mammalia)*

HORSFALL, W. R. B.S., M.S., Ph.D., Prof. — Dept. of Entomol., Univ. of Illinois, 320 Morrill Hall, URBANA, Ill., U.S.A.
a. Thermal stress on histopathology during postembryogeny. *Ochlerotatus* spp., *Aedes* spp. *(Culicidae, Diptera)*

HÖRSTADIUS, S. Fil.Dr., M.I.I.E., Prof. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Determination in the egg; analysis of the gradients and the processes behind them. *(Echinoidea)*
b. The effect of various antimetabolites on embryonic development. *(Echinoidea)*

HORSTMANN, E. Dr.med. et phil., Prof. — Univ.-Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutsche Bundesrepublik
a. Spermatozoen und ductus epididymidis. *Lepus cuniculus, Canis familiaris, Homo sapiens (Mammalia)*

HORSTMANN, H.-J. Dr.phil.nat. — Physiol.-Chem. Inst. der Univ. Erlangen-Nürnberg, Wasserturmstr. 5, ERLANGEN, Deutsche Bundesrepublik

a. Stoffwechsel von Embryonen. *Limnaea stagnalis (Gastropoda)*

b. Enzyme des Kohlenhydrat-Stoffwechsels. *Helix pomatia (Gastropoda)*

HORVÁTH, Miss C. M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u.58, BUDAPEST IX, Hungary

a. Teratogenesis. *Gallus domesticus (Aves)*

HOSHINO, K. M.D., D.Med.Sc. — Dept. of Anat. and Cancer Research Lab., Fac. of Med., Univ. of Western Ontario, LONDON, Ontario, Canada

a. Development and growth of mammary glands after prenatal exposure to progesterone. *Mus musculus (Rodentia)*

b. Influences of estrogen, progesterone, and prolactin upon mammary growth of male and female immature animals. *Mus musculus (Rodentia)*

HSÜ(LIANG), Mrs. C. Y. B.S., M.S., Ph.D., Prof. — Dept. of Biomorphics, Natl. Defense Med. Center, TAIPEI, Taiwan, Republic of China

a. Aureomycin and growth of thyroidectomized tadpoles. *Rana catesbeiana (Anura)*

b. Ageing in thyroidectomized tadpoles. *Rana catesbeiana (Anura)*

c. Urine nitrogen of thyroidectomized tadpoles. *Rana catesbeiana (Anura)*

d. The effect of age and temperature on the action of aureomycin on tadpole development. *Rana narina (Anura)*

e. Food intake and microscopic structure of thyroidectomized tadpoles treated with aureomycin. *Rana catesbeiana (Anura)*

HUANG, Ru-chih Ph.D. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.

a. Chemistry of histones. *Pisum* spec. *(Labiatae)*

b. Regulation of gene function at the molecular level. *Pisum* spec. *(Labiatae)*

HUBER, W. D.Sc. — Muséum d'Histoire Naturelle, BERNE, Suisse

HUBERT, J. Lic.ès Sci.Nat., D.E.S. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France

a. Régulation de l'oeuf. *Lacerta vivipara (Lacertilia)*

b. Lignée germinale; étude descriptive et expérimentale. *Lacerta vivipara Lacertilia)*

HUBSCHMAN, J. H. A.A.S., B.S., Ph.D. — Div. of Life Sciences, Dayton Campus, State University, DAYTON, Ohio 45431, U.S.A.

a. Endocrine control of growth and development (metamorphosis) in larvae. *Palaemonetes* spp. *(Decapoda, Crustacea)*

HUCKINS, C. B.Sc., M.Sc., Ph.D. — Dept. of Anat., McGill Univ., MONTREAL, Quebec, Canada

a. Initiation of spermatogenesis. *Rattus norvegicus (Rodentia)* (in collaboration with Y. CLERMONT)

b. Growth and renewal of the spermatogonial population in prepuberal animals. *Rattus norvegicus (Rodentia)*

HUEMER, R. P. B.A., M.D. — Dept. of Devel. Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif., U.S.A.

a. Immunogenetic analysis of cancer. *Mus musculus (Rodentia)*

b. Autoimmune phenomena in relation to ageing. *Mus musculus (Rodentia), Homo sapiens (Primates)*

HUGHES, A. F. W. M.A., Ph.D., Sc.D. — Dept. of Zool., Univ. of Bristol, BRISTOL 8, England

a. Neuro-embryology. *Eleutherodactylus martinicensis (Anura)*

HULTIN, J. M. T. Fil.Dr., M.I.I.E. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. Protein and nucleic acid metabolism in early development. *(Echinoidea)*

HUMIŇSKI, S. Dr. — Chair of Zool., Coll. of Agricult., Cybulskiego 20, WROCŁAW, Poland

a. Influence of food, light, temperature and hormones on the male sexual apparatus during the resting period. *Microtus arvalis, M. agrestis (Microtidae, Rodentia), Apodemus agrarius, A. flavicollis, Mus musculus (Muridae, Rodentia)*

HUMMEL, Miss K. P. Ph.D. — The Jackson Lab., BAR HAROR, Me. 04609, U.S.A.

a. Developmental anatomy and genetics. *Mus musculus (Rodentia)*

HUMPHREY, R. R. A.M., Ph.D., M.I.I.E., Prof. (Emer.) — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.

a. Genetic and experimental study of a trait characterized by sterility in males, and inability of eggs of females to develop beyond gastrulation. *Ambystoma mexicanum (Urodela)*
b. Studies on a trait involving limb abnormalities and renal dysfunction. *Ambystoma mexicanum (Urodela)*

HUMPHREY, Miss T. M.D., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Univ. of Alabama Med.Center, 1919 Seventh Avenue South, BIRMINGHAM 3, Ala., U.S.A.

a. Correlation of fetal reflexes with central and peripheral differentiation of the nervous system. *Homo sapiens (Primates)*
b. Development of the hippocampal formation in embryos.
c. Development of the tuberculum olfactorium in embryos.
d. Differentiation of the vestibular nuclei in the fetus.

HUMPHREYS, T. D. B.S., Ph.D. — Dept. of Biol., Massachusetts Inst. of Technol., CAMBRIDGE, Mass.02139, U.S.A.

a. The structure and function of intercellular materials involved in cell adhesion. *Dictyostelium discoideum (Acrasiales), Polysphondylium pallatum (Protozoa), Haliclona occalata (Haplosclerina, Porifera), Microciona prolifera (Poecilosclerina, Porifera)*
b. Gene function during development. *Strongylocentrotus purpuratus (Echinoidea), Gallus domesticus (Aves)*

HUMPHREYS, W. J. A.B., M.A., Ph.D. — Dept. of Zool., Univ. of California, BERKELEY 4, Calif., U.S.A.

a. Ultrastructure of blastomeres in mosaic eggs. *Mytilus edulis (Lamellibranchia)*

HUMPHRIES, A. A., Jr. Ph.D., Prof. — Dept. of Biol., Emory Univ., ATLANTA 22, Ga., U.S.A.

a. Oviduct-oocyte relationships. *(Amphibia)*
b. Cytochemistry of egg jelly. *(Amphibia)*
c. Incorporation of nucleosides into maturing oocytes (autoradiography). *(Amphibia)*

HUNT, Miss D. M. B.A., — Worcester Foundation for Exp.Biol., 222 Maple Avenue, SHREWSBURY, Mass., U.S.A.

a. Fertilization in vivo and in vitro, gonadogenesis, and irradiational effects on early embryological stages (morphology and physiology). *Oryctolagus cuniculus, Lepus americanus, Sylvilagus transitionalis (Lagomorpha), Cavia porcellus. Mus musculus, Rattus rattus, Mustela furio, Mesocricetus auratus, (Rodentia)*

HUNT, E. L. Ph.D., Prof. — Dept. of Biol., Emory Univ., ATLANTA 22, Ga., U.S.A.

a. Studies on the estrus cycle and gestation in alloxan-diabetic animals. *Rattus norvegicus (Rodentia)*
b. Developmental pathology of the endocrine pancreas. *Gallus domesticus (Aves)*

HUREAU, J. Prof. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Développement du rein. *Homo sapiens (Primates)*

HUVER, C. W. B.S., M.S., Ph.D., Prof. — Dept. of Zool., Coll. of Biol. Sci., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

a. Cytology of fertilization. *Fundulus heteroclitus (Teleostei)*
b. Mechanism of blastodisc formation; site and origin of blastodisc. *(Teleostei)*
c. Sex differentiation. *Anguilla bostoniensis (Teleostei)*
d. Hermaphroditism. *Gasterosteus aculeatus (Teleostei)*
e. Cytochemistry of spermatogenesis. *Fundulus diaphanus (Teleostei)*
f. Growth. *Perca flavescens (Teleostei)*
g. Chromosome numbers. *Fundulus heteroclitus, F. diaphanus (Teleostei)*

HYODO, Miss Y. B.Sc. — Div. of Biol., Nat. Inst. of Radiol. Scis., Anagawa 4-9, CHIBA, Japan

a. Change in radiation-sensitivity during embryonic development. *Oryzias latipes (Teleostei)* (in collaboration with N. EGAMI)
b. Embryology of endocrine organs. *Oryzias latipes (Teleostei)* (in collaboration with N. EGAMI)
c. Change in radiosensitivity of germ cells during embryonic development. *Oryzias latipes (Teleostei)*
d. Embryology of reproductive organs. *Oryzias latipes (Teleostei)*

ICHIKAWA, A. M.Sc., D.Sc., Prof. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan

a. Development and life-history of Japanese forms. *(Rhizocephala*, and parasitic *Isopoda; Crustacea)*
b. Regeneration. *(Turbellaria)*

ICHIKAWA, M. D.Sc., M.I.I.E., Prof. — Lab. of Developmental Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan

a. Hormonal mechanism of metamorphosis. *Philosamia cynthia ricini, Bombyx mori (Lepidoptera)*
b. Purification of the brain hormone. *Bombyx mori* and other spp. *(Lepidoptera)* (in collaboration with H. ISHIZAKI)

IGNATJEVA, Mrs. G. M. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Regional induction capacities of the chorda-mesoderm. *Huso huso, Acipenser güldenstädti, A. stellatus (Acipenseridae, Chondrostei)*

b. Dynamics of gastrulation movements. *(Acipenseridae, Chondrostei; Urodela)*

IKEDA, Miss M. Ph.D. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

a. UV-irradiation and SH radicals in eggs. *Hemicentrotus pulcherrimus (Echinoidea)*

b. Protein-synthesis in synchronized cultures. *Tetrahymena* spec. *(Holotricha, Ciliata)*

IKUSHIMA, N. D.Sc. — Biol. Lab., Kansai Med. School, HIRAKATA, Osaka Pref., Japan

a. Mechanism of gastrulation (experimental morphology). *Hynobius* spec., *Triturus* spec. *(Urodela)*

IMAIZUMI, T. D.Sc. — Zool. Inst., Fac. of Sci., Univ. of Kyoto, Sakyo-ku, KYOTO, Japan

a. Studies on the hereditary lethals. *Drosophila* spec. *(Diptera)*

IMBERSKI, R. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts, BALTIMORE, Md. 21218, U.S.A.

a. Regulation of macromolecular synthesis. *Drosophila* spec. *(Diptera)*

IMMERS, J. Fil.Dr. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. Biochemical factors in development, particularly the role of mucopolysaccharides. *(Echinoidea)*

b. Protein biosynthesis. *Paracentrotus lividus, Sphaerechinus granularis, Echinus esculentus, Psammechinus miliaris (Echinoidea)*

INCE, Miss F. E. M.Sc. — Dept. of Zool., Bedford Coll., Regent's Park, LONDON N.W.1, England

(no embryological work in progress)

INGEN, Miss H. C. van Med.Drs. — Anat.-Embryol. Lab., Fac. of Med. State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands

INOUE, S. D.Sc. — Dept. of Comp. Endocrinol., Inst. of Endocrinol., Gunma Univ., Showa-Machi, MAEBASHI, Japan

a. Regeneration with special reference to nerve (histology, histochemistry, electronmicroscopy, radioautography). *Cambarus clarkii (Decapoda, Crustacea), Triturus pyrrhogaster, T. viridescens (Urodela)*

b. Spontaneous tumorous diseases. *Triturus pyrrhogaster, T. viridescens (Urodela)*

ISHIDA, J. Dr.Sci., M.I.I.E. — Zool. Inst., Fac. of Sci., Tokyo Univ., Bunkyo-ku, TOKYO, Japan

ISHIHARA, K. M.Sc., Dr.Sc. — Dept. of Biochem., Boston Univ. School of Med., BOSTON 18, Mass., U.S.A.

ISHIKAWA, M. M.A., D.Sc. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, Japan

a. Physiological studies on fertilization and artificial parthenogenesis. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)* (in collaboration with M. SUGIYAMA)

ISHIZAKI, H. D.Sc. — Lab. of Developmental Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan

a. Extraction and purification of the brain hormone. *Bombyx mori (Lepidoptera)* (in collaboration with M. ICHIKAWA)

b. Ultrastructural and biochemical studies on fat body cell. *Phylosamia cynthia ricini (Lepidoptera)*

ISLAM, A. Ph.D. — Dept. of Zool., Government Coll., LAHORE, Pakistan

ISONO, N. Ph.D. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

a. Carbohydrate metabolism of eggs. *Hemicentrotus pulcherrimus (Echinoidea)*

b. Acid soluble nucleotides of eggs and sperm. *Hemicentrotus pulcherrimus (Echinoidea)*

ITO, I. M.D. — National Cancer Center Hospital, Tsukiji 5 chome, Chuoku, TOKYO, Japan

a. Isolation and purification of oncotrephin from human malignant tissues.

b. Purification of an oncotrephin-like substance from regenerating liver and embryo extract. *Rattus* spec. *(Rodentia)*, *Gallus* spec. *(Aves)*

c. Studies on action-modes of oncotrephin-like substances.

ITO, S. — Dept. of Biol., Fac. of Sci., Kumamoto Univ., Kurokami-machi, KUMAMOTO, Japan

ITO, T. Dr.Agr. — Sericult. Exper. Station, Koenji, Suginami-ku, TOKYO, Japan

IUCIF, S. Ph.D. — Dept. de Morfol. Humana Funcional e Aplicada, Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, SÃO PAULO, S.P., Brasil

a. Allometric growth of the skull and the dental arch. *(Rodentia)*

b. Allometric growth of the suprarenal gland in castrated animals. *Rattus rattus (Rodentia)*

IVANOVA (KASAS), Mrs. O. M. Dr.Biol.Sci., Prof. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St.5, LENINGRAD, U.S.S.R.

a. Descriptive and comparative embryology. *(Hymenoptera; Diptera), (Ascidiacea, Phyrosomida, Tunicata)*

b. Morphology of embryonic development, metamorphosis and asexual reproduction. *Distaplia unigermis (Polycitoridae, Aplonsobranchia, Ascidiacea)*

IVERSON, R. M. Ph.D., Prof. — Dept. of Zool., Univ. of Miami, CORAL GABLES, Fla., U.S.A.

a. Nucleic acids during development. *Lytechinus variegatus (Echinoidea)*

b. Development of the mitotic apparatus and protein synthesis in eggs and embryos. *(Echinoidea)*

IWAMATSU, T. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. Fertilizability of pre-ovulation ova. *Oryzias latipes (Teleostei)*

IWASAKI, T. D.Sc. — Div. of Biol., Nat. Inst. of Radiol. Scis., Anagawa 4-9, CHIBA, Japan

a. Effects of ionizing radiations on embryonic development. *Artemia salina (Anostraca, Crustacea)*

b. Cytological studies on the radiosensitivity of spermatogenesis. *Bombyx mori (Lepidoptera)*

IWASAWA, H. D.Sc. — Zool. Lab., Coll. of Gen. Education, Niigata Univ., NIIGATA, Japan

a. Embryological study on endocrine correlation. *(Amphibia)*

b. Comparative anatomy of genital system *(Amphibia)*

IWATA, F. M.Sc., D.Sc. — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
- a. Studies on the comparative embryology with special reference to taxonomic interrelationships. *(Nemertea)*

IYEIRI, Miss S. M.Sc., D.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
- a. Inductive effects of embryonic juice. *Triturus pyrrhogaster (Urodela), Gallus domesticus (Aves)*
- b. Fractionation of inductive agents from mammalian tissues (normal, regenerating and cancer tissues). *Triturus pyrrhogaster (Urodela), Rattus* spec., *Cavia* spec. *(Rodentia)*
- c. Inducing substances in animal tissues. *Triturus pyrrhogaster (Urodela), Gallus domesticus (Aves), Rattus norvegicus albinus (Rodentia)*

JACOB, J. M.A., Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
- a. Ultrastructure and ultrastructural cytochemistry of nucleolus in larval salivary gland cells. *Smittia parthenogenetica (Chironomidae, Diptera)* (in collaboration with J. L. SIRLIN)
- b. Biochemical characterization of nuclear ribonucleic acids in larval salivary gland cells. *Smittia parthenogenetica (Chironomidae, Diptera)* (in collaboration with J. L. SIRLIN)
- c. Ultramorphology of secretion in larval salivary glands. *Bradysia mycorum (Sciaridae, Diptera), Smittia parthenogenetica (Chironomidae, Diptera)* (in collaboration with A. JURAND)

JACOBS, J. Ph.D. — Zool. Inst. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik
- a. Regulation and environmental control of relative growth rates of the head in cyclomorphic animals. *Daphnia galeata, D. mendotae (Cladocera, Crustacea)*

JACOBS, W. P. A.B., Ph.D. — Dept. of Biol., Princeton Univ., Box 704, PRINCETON, N.J.08540, U.S.A.
- a. Experimental developmental morphology, using controlled environment chambers, electronic computer processing of data, and studies of hormonal effects on organ and cell differentiation. *Caulerpa prolifera (Siphonales, Algae), Coleus blumei (Labiatae)*

JACOBSON, Mrs. A. E. Fil.mag. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
- a. The mechanism of neurulation. *Ambystoma mexicanum (Urodela)* (in collaboration with D. C.-O. JACOBSON)

JACOBSON, A. G. A.B., Ph.D., Prof. — Dept. of Zool., The Univ. of Texas, AUSTIN, Tex. 78712, U.S.A.
- a. Induction and positioning of the nose, lens and ear. *Taricha torosa (Urodela)*
- b. Factors controlling the segregation of the optic vesicle into pigmented retinal epithelium and sensory retina. *Taricha torosa (Urodela)*
- c. Characterization of the endodermal substance that induces heart development. *Taricha torosa (Urodela)*

JACOBSON, D. C.-O. Fil.Dr. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
- a. Determination of the central nervous system. *Ambystoma* spec. *(Urodela)*

b. Experimental studies on fiber pattern formation in the medulla oblongata. *Ambystoma* spec. *(Urodela)*
c. The mechanism of neurulation. *Ambystoma* spec. *(Urodela)* (in collaboration with Mrs. A. E. JACOBSON)

JACOBSON, M. B.Sc., M.B., Ch.B., Ph.D. — Dept. of Physiol., Univ. Med. School, Teviot Place, EDINBURGH 8, Scotland
a. Regeneration of the optic nerve. *(Amphibia)*
b. Mechanism of development of connections in the nervous system. *(Amphibia)*

JAFFE, L. F. B.S., Ph.D., Prof. — Biol. Div., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a. Development of cell polarity; studied via electrical measurements, group effects, rheotropism and chemotropism. *Fucus furcatus (Algae)*

JAFFEE, O. C. B.A., M.S., Ph.D. — Dept. of Biol., State Univ. of New York at Buffalo, BUFFALO 14, N.Y., U.S.A.

JAGER, B. de Prof. — Div. of Fisheries, Beach Rd., Sea Point, CAPE TOWN, Republic of South Africa
(no embryological work in progress)

JAGER, J. N. Med.drs. — Div. of exper.Morphol., Dept. of Anat. and Embryol., Mauritskade 61, AMSTERDAM O., Netherlands
a. Studies on the teratogenic effect of anti-metabolites. *Gallus* spec. *(Aves)* (in collaboration with H. A. L. TRAMPUSCH)

JÄGERSTEN, K. G. M. Fil.Dr., Prof. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Larval development. *(Pogonophora)*
b. Comparative study of larval development. *(Invertebrata)*

JAMES, D. W. M.B., B.S. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England
a. Healing of skin wounds. *Rattus* spec., *Cavia* spec. *(Rodentia)*, *Oryctolagus* spec. *(Lagomorpha)*

JANSEN, J. M.D., M.I.I.E. — Anat. Inst., Univ. of Oslo, Karl Johansgt. 47, OSLO, Norway
a. Development of inferior olive. *Balaenopterus physalus, B. musculus (Cetacea)*
b. Development and homology of the central cerebellar nuclei. *Balaenopterus physalus, B. musculus (Cetacea)*

JAYLET, A. Lic.ès Sci. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE, France
a. Action des rayons X sur le développement, *(Urodela)*
b. Etude d'un facteur récessif semi-létal, ac. *Pleurodeles waltlii (Urodela)* (en collaboration avec J. C. BEETSCHEN)

JELÍNEK, R. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a. Quantitative changes of tissue, cellular and subcellular structure in normal and pathological ontogenesis of the central nervous system. *(Vertebrata)*
b. Structure of the internal limiting membrane of the developing central nervous system. *Gallus domesticus (Aves)*
c. Mechanism of neurulation. *Gallus domesticus (Aves)*

JIRÁSEK, J. E. MUDr., C.Sc. — Embryol. Lab., Inst. for the Care of Mother and Child, nábř. K. Marxe 157, PRAHA-Podolí, Czechoslovakia
a. Biochemistry of embryonic growth. *Homo sapiens (Primates)*
b. Histochemical analysis of organogenesis. *Homo sapiens (Primates)*

JIRSOVÁ, Miss Z. MUDr. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a. Egg transplantation (electron microscopic and cytochemical studies of egg transport and implantation in experimental conditions). *(Mammalia)*

JIT, I. M.B., B.S., M.S., Ph.D., Prof. — Dept. of Anat., Med. Coll., ROHTAK, Punjab, India
a. Development of the splanchnic nerves. *Homo sapiens (Primates)*
b. Development of striated muscle of oesophagus. *Homo sapiens (Primates)*

JOHANSSON, K. B, G. Fil.kand. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Regulation of enzyme synthesis in cells in tissue culture.
b. Established cell strains. *Homo sapiens (Primates)*

JOHANSSON, N. Fil.lic. — Zool. Inst., Univ. of Gothenborg, Fjärde Långgatan 7B, GÖTEBORG-SV, Sweden
a. Embryological studies. *Homarus vulgaris (Crustacea)*
b. Spermiogenesis and oogenesis. *Homarus vulgaris (Crustacea)*

JOHNEN, Miss A. G. Dr.phil., M.I.I.E., Doz. — Zool. Inst. der Univ., Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik
a. Die Wirkungsspezifität abnormer Induktoren in der Entwicklung. *(Amphibia)*
b. Die Bedeutung des Zeitfaktors beim Induktionsvorgang. *Ambystoma* spec., *Triturus* spec. *(Urodela)*
c. Untersuchungen über die Kompetenzverhältnisse beim Ektoderm. *(Urodela)*

JOHNSON, E. M. B.S., M.S., Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Fla., U.S.A.
a. Electrophoretic and biochemical analysis of abnormal development. *Rattus rattus (Rodentia)*
b. Molecular enzymology during morphogenesis. *Dictyostelium discoideum, (Acrasiales)*

JOHNSON, G. Dr.ès Sci. — Lab. de Zool. et Biol. anim., Fac. des Sci., POITIERS. Vienne, France

JONES, K. W. B.Sc., Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Small aggregate cultures of embryonic cells. *Rana pipiens (Anura)*
b. Ultrastructural effects of actinomycin D on cultured embryonic cells. *Rana pipiens (Anura)*
c. Regulatory mechanisms in lens regeneration. *Xenopus laevis (Anura)* (in collaboration with J. C. CAMPBELL)

JONES, O. P. Ph.D., M.D., Prof. — Dept. of Anat., State Univ. of New York at Buffalo, 15 The Circle, BUFFALO 14, N.Y., U.S.A.
a. Embryonic blood cells in the yolk sac. *Rattus* spec. *(Rodentia)*
b. Electron microscopy of hepatic hematopoiesis. *Rattus* spec. *Homo sapiens (Mammalia)*

JONES, R. O. B.Sc. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Road, EDINBURGH 9, Scotland

JONES, W.E. B.Sc., Ph.D. — Marine Science Labs., Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales

a. Attachment and development of spores. *(Rodophyceae)*

JONGH, H.J. de — Zool. Lab., State Univ. of Leiden, Kaiserstr. 63 ,LEIDEN, Netherlands

a. Functional morphology of the head, with special reference to larval life and metamorphosis. *Rana temporaria (Anura)*

JONSSON, B. G. Fil.kand. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden

a. The effect of various drugs (a.o. thalidomide) on embryonic development. *Ambystoma* spec. *(Urodela)*, *Rattus* spec. *(Rodentia)*, *Oryctolagus* spec. *(Lagomorpha)*

JOÓ, F. M.D. — Dept. of Anat., Univ. Med. School, SZEGED, Hungary

a. Developmental histochemistry of the archicerebellar cortex. *Mus rattus (Rodentia)* (in collaboration with B. CSILLIK and P. KÁSA)

b. Developmental histochemistry of brain capillaries. *Mus rattus (Rodentia)*

JORDAN, Miss M. A. Ph.D. — Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKÓW, Poland

JOST, A. D. D.Sc., M.D.(hon.c.), M.I.I.E., Prof. — Lab. de Physiol. comp., Fac. des Sci., Univ. de Paris, 9 Quai St. Bernard, PARIS Ve, France

JOUBERT, D. M. M.Sc. (Agric.), Ph.D. — Dept. of Sheep and Wool Science, Univ. of Pretoria, PRETORIA, Republic of South Africa
(no embryological work in progress)

JOUBERT, P. J. M.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa

a. The ontogenesis of the sound-conducting apparatus and of the palatoquadrate. *Arthroleptella lightfooti (Ranidae, Anura)*

JOVICKI, Mrs. G. RISTIĆ B.Sc. — Inst. of Nuclear Sci. "Boris Kidrich", BELGRADE, Yugoslavia

a. Teratological changes in embryos produced by nucleic acids in early embryogenesis; effects on progeny of these animals. *Gallus domesticus (Aves)*

JUBERTHIE, C. J. — Lab. Souterrain du C.N.R.S., MOULIS (Ariège), France

a. Etude de l'influence de la température sur l'embryogénèse, et étude des anomalies provoquées (p.ex. polymélie). *Odiellus gallicus (Phalangiidae, Opiliones, Arachnoidea)*

b. Etude comparée du développement embryonnaire. *Siro* spec. *(Sironidae)*, *Querilhacia* spec. *(Phalangodidae)*, *Ischyropsalis* spec. *(Ischyropsalidae)*, *Odiellus gallicus (Phalangiidae, Opiliones, Arachnoidea)*

JUBERTHIE-JUPEAU, Mrs. L. — Lab. Souterrain du C.N.R.S., MOULIS (Ariège), France

a. Regeneration and the endocrine system. *Scutigerella* spec. *(Symphyla, Myriapoda)*

JUNG, E. Dr.rer.nat. — Heiligenberg-Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik

a. Larval development. *Bruchidius (=Acanthoscelides) obtectus (Bruchidae, Coleoptera)*

b. Ligaturing experiments to characterize the physiological egg-type. *Bruchidius (= Acanthoscelides) obtectus (Bruchidae, Coleoptera)*
c. Further experiments to determine the ooplasmic reaction-system. *Bruchidius (= Acanthoscelides) obtectus (Bruchidae, Coleoptera)*

JURA, Cz. D.Sc. — Zool. Dept., Jagiellonian Univ., ul. Krupnicza 50, KRAKOW, Poland
a. Histochmical studies on development. *Melasoma populi (Coleoptera)* (in collaboration with Miss A. KRZYSZTOFOWICZ and Miss B. WĘGLARSKA)
b. Early developmental stages. *Tetrodontophora bielanensis (Collembola)*
c. Origin and fate of the pole cells. *Drosophila virilis (Diptera)*

JURAND, A. Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Electron microscope observations of developing limb buds. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Early changes in limb buds after thalidomide treatment. *(Gallus domesticus (Aves)*
c. Cell death in developing limb buds. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
d. Ultramorphology of secretion in larval salivary glands. *Bradysia mycorum (Sciaridae, Diptera), Smittia parthenogenetica (Chironomidae, Diptera)* (in collaboration with J. JACOB)

JURGENS, J. D. M.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
a. Study of the nasal capsule and its bearing on phylogeny. *(Amphibia)*

JUROVITSKY, J. G. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

KACZANOWSKI, A. Mgr. of Sci. — Inst. of Zool., Warsaw Univ., WARSZAWA 64, Poland
a. Growth of cortical parts; division and regulation of shape; the problem of morphological meaning of fibrillar structure. *Opalina ranarum, Cepedea dimidiata, Protoopalina intestinalis (Opalina, Mastigophora)*

KADASNE, D. K. M.B.B.S., M.S. — Dept. of Anat., Med. Coll., NAGPUR 3, Maharashtra State, India
a. Differentiation of spinal ganglia of chick in vitro and in vivo *Gallus domesticus (Aves)*

KAHN, A. J. B.A., M.S., Ph.D. — Dept. of Zool., Syracuse Univ., 111 Lyman Hall, SYRACUSE, N.Y. 13210, U.S.A.
a. Mechanisms in the control of morphogenesis and differentiation. *Dictyostelium* spec., *Polyspondylium* spec., *Protostelium* spec. *(Acrasina)*
b. Mechanisms in the control of cell movement in amoeboid microorganisms. *Dictyostelium* spec., *Polyspondylium* spec., *Protostelium* spec. *Acrasina)*

KAIGHN, M. E. Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a. Animal viruses as tools in studying embryonic development. *Gallus gallus (Aves)* (in collaboration with J. D. EBERT)

KAJI, S. D.Sc., Prof. — Dept. of Biol., Fac. of Sci., Kônan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan
a. Tissue differentiation of the eye disc in the Bar mutant. *Drosophila melanogaster (Diptera)*

KAJII, T. M.D. — Dept. of Pediat., Hokkaido Univ. School of Med., North 14, West 4, SAPPORO, Japan
  a. Congenital malformations and cytogenetics. *Homo sapiens (Primates)*

KAJISHIMA, T. M.A., D.Sc., M.I.I.E. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
  a. Developmental analysis of the genetical characters. *Carassius auratus (Teleostei)*
  b. Biochemical analysis of gene functions. *Carassius auratus (Teleostei)*

† KÄLIN, J. Dr., Prof. — Inst. de Zool. et d'Anat. comp., Univ. de Fribourg, FRIBOURG, Suisse
(deceased)

KÄLLÉN, A. J. B. M.D., M.I.I.E. — Tornblad-Inst. for comp. Embryol., Biskopsgatan 7, LUND, Sweden

KALLMAN, Miss F. L. Ph.D. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif., U.S.A.
  a. Epithelio-mesenchymal interactions during salivary morphogenesis.
  b. Nature of interface materials during development.

KÁLMÁN, G. Ph.M. — Dept. of Anat., Univ. Med. School, SZEGED, Hungary
  a. Submicroscopical analysis of the development of post-synaptic membranes. *Mus rattus (Rodentia)* (in collaboration with B. CSILLIK)

KALTENBACH, Mrs. J. COUFFER B.S., M.A., Ph.D., Prof. — Dept. of Biol. Scis., Clapp Lab., Mount Holyoke Coll., SOUTH HADLEY, Mass. 01075, U.S.A.
  a. Local action of thyroxine on amphibian metamorphosis: histological and histochemical studies. *Rana pipiens (Anura)*

KALTER, H. Ph.D., Prof. — Children's Hosp. Res. Found., Div. of Teratol., Elland and Bethesda Avenues, CINCINNATI, Ohio 45229, U.S.A.
  a. Genetic-environmental interrelationships in experimental teratogenesis. *Mus musculus (Rodentia)*
  b. Experimental production of congenital malformations of the central nervous system. *Mus musculus (Rodentia)*

KAMAR, G. A. R. Ph.D., Prof. — Animal Production Dept., Fac. of Agriculture, Cairo Univ., GIZA, Egypt
  a. Factors influencing reproduction and production as far as the endocrines and gonads are concerned. *(Aves)*
  b. Growth and factors affecting expecially the endocrines. *(Aves)*
  c. Factors influencing production and reproduction as far as the environmental conditions are concerned. *(Aves)*

KAMAT, D. N. M.Sc., Ph.D. — Dept. of Zool., Shivaji Univ., KOLHAPUR, Maharashtra State, India
  a. A histochemical (qualitative and quantitative) study of the phosphatases in the larval stages. *Chrysomia megalocephala (Diptera)* (in collaboration with P. S. CHITNIS, Poona)
  b. A study of the internal structure of the Nebenkern in sperm cells; effect of various chemicals. *Odontopus nigrovinosum (Hemiptera)*
  c. Metachromasia of various ovarian cell types. *(Gastropoda)*
  d. Histochemistry of adult and developing epididymis; study of hydrolytic enzymes, lipids and carbohydrates. *Hirudo* sp. *(Hirudinea, Annelida)* (in collaboration with Miss S. BAPAT)

KAMEL, A. B.Sc., Ph.D., Prof. — Dept. of Zool., Fac. of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt
- a. Effect of cytotoxic substances on development. *(Amphibia; Aves)*
- b. Studies on early development. *Chalcides ocellatus (Lacertilia)*

KAMEYAMA, Y. M.D., D.Med.Sci. — Res. Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan
- a. Effects of ionizing radiation upon the embryo. *Mus musculus (Rodentia)* (in collaboration with U. MURAKAMI, T. SAKURAI and K. OHMORI)
- b. Effects of reduced atmospheric pressures upon the embryo. *Mus musculus (Rodentia)* (in collaboration with U. MURAKAMI and K. OHMORI)
- c. Effects of some chemical substances upon the embryo. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI and N. KUROMIYA)
- d. Mechanism responsible for malformations of the extremity in the embryo. *Mus musculus (Rodentia)* (in collaboration with U. MURAKAMI)

KAMPHUIS, L. W. Med.Drs. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands
- a. Study on the development of organ-specific enzymes or enzyme-patterns, e.g. in liver. *(Aves; Mammalia)*

KANATANI, H. D.Sc., Prof. — Div. of Physiol. of Marine Organisms, Ocean Research Inst., Univ. of Tokyo, Sakaechodori, Nakanoku, TOKYO, Japan
- a. Mechanism of spawning. *Asterias amurensis, Asterina pectinifera (Asteroidea, Echinodermata)*
- b. Fertilization. *(Echinodermata)*
- c. Mode of action of active principle responsible for maturation of ovarian eggs. *(Asteroidea, Echinodermata)*

KANAZIR, D. T. M.D., Ph.D., Prof. — Inst. of Nuclear Sci. "Boris Kidrich", BELGRADE, Yugoslavia
- a. Teratological changes in embryos produced by nucleic acids in early embryogenesis; effects on progeny of these animals. *Gallus domesticus (Aves)*

KANJI, S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India
- a. Induced changes. *(Amoebina)* (in collaboration with S. MOOKERJEE and S. CHATTERJEE)

KANKAVA, Mrs. B. Z. Cand.biol.sci. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.
- a. Distribution of lipids in the testis during embryonic and postembryonic ontogenesis. *Microtus agrestis (Cricetidae, Rodentia)*
- b. Influence of Pasteurelose on the extra-embryonic membrane system. *Gallus gallus (Aves)*

KANOH, Y. D.Sc., M.I.I.E., Prof. — Akkeshi Marine Biol. Station, Hokkaido Univ., AKKESHI, Japan
- a. Electronmicroscope observation of spermatozoa and fertilization process. *(Crustacea; Cyclostomata; Teleostei; Amphibia)*

KAPLAN, N. O. Ph.D., Prof. — Graduate Dept. of Biochem., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.

a. Enzyme development. *(Vertebrata)*

KARASAKI, S. M.Sc., Ph.D. — Montreal Cancer Inst., Notre-Dame Hosp., MONTREAL 24, Quebec, Canada
  a. Nuclear RNA synthesis in embryonic development. *Triturus* spec. *(Urodela), Arbacia* spec. *(Echinoidea), Spisula* spec. *(Lamellibranchia)*
  b. Changes of fine structure during oogenesis, embryogenesis and regeneration. *Arbacia* spec. *(Echinoidea), Spisula* spec. *(Lamellibranchia), Triturus* spec., *Rana* spec. *(Amphibia)*
  c. Studies on yolk. *Triturus* spec., *Rana* spec. *(Amphibia)*

KARLIN, Miss D. B.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
  a. The ultrastructural changes which occur in blastoderm cells as they differentiate into either epi- or hypoblastic cells. *Gallus domesticus (Aves)*

KARNAVAR, G. K. M.Sc. — Dept. of Zool., M. S. Univ. of Baroda, BARODA 2, India
  a. Physiology of metamorphosis. *Anthrenus vorax, Trogoderma granarium (Dermestidae, Coleoptera)* (in collaboration with K. S. S. NAIR)

KÁSA, P. M.D. — Dept. of Anat., Univ. Med. School, SZEGED, Hungary
  a. Developmental histochemistry of the archicerebellar cortex. *Mus rattus (Rodentia)* (in collaboration with B. CSILLIK and F. JOÓ)
  b. Developmental histochemistry of the cerebellum. *Cavia cobaya (Rodentia). Felis catus, Canis familiaris (Carnivora)* (in collaboration with B. CSILLIK)

KASSNER, J. D.Sc. — Zaklad Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
  a. Morphogenesis of scales. *Salmo* spec. *(Teleostei)*

KATAGIRI, Ch. M.Sc., D.Sc. — Zool. Inst., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
  a. Fertilization and cleavage. *Rana* spec., *Bufo* spec .*(Anura)*

KATAKURA, Y. M.A. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan
  a. Development of the sex characters. *Armadillidium vulgare (Isopoda, Crustacea)*

KATASHIMA, R. D.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan
  a. Breeding system. *Euplotes* spec. *(Ciliata)*

KATHIRESAN, Mrs. S. M.B., B.S., M.Sc. — Dept. of Anat., Madurai Med. Coll., MADURAI, Madras, India

KATO, K.-I. Ph.D. — Dept. of Biol., Osaka Dental Coll., HIRAKATA, Osaka Pref., Japan
  a. Histochemistry of proteins in salivary gland chromosomes in relation to cytodifferentiation and gene activation. *(Diptera)*

KATO, M. D.Sc. — Lab. of Developmental Biol., Zool. Inst., Fac. of Sci., Univ. of Kyoto, KYOTO, Japan
  a. Artificial diet. *Bombyx mori (Lepidoptera)*

KATO, M. B.S. — Dept. of Anat., Fac. of Med., Tokyo Med. and Dental Univ., Yushima 3, Bunkyo-ku, TOKYO, Japan

a. Experimental studies on lens regeneration. *Triturus pyrrhogaster, Hynobius nebulosus (Urodela)*
b. Tissue culture studies on the development of the mammary gland. *Rattus norvegicus, Homo sapiens (Mammalia)*

KATO, Y. Ph.D. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

KATOH, A. K. Ph.D. — Div. of Biol. and Med. Res., Argonne Natl. Lab., 9700 South Cass Ave., ARGONNE, Ill. 60440, U.S.A.
a. Differentiation of the embryonic circulatory system. *Gallus domesticus (Aves)*

KATSH, S. B.A., M.S., Ph.D., Prof. — Dept. of Pharmacol., Univ. of Colorado Med. Center, 4200 East Ninth Avenue, DENVER 20, Colo., U.S.A.
(no embryological work in progress)

KATSURA, S. M.D. — First Dept. of Anat. and Komatsujima Station for Exper. Biol., School of Med., Tokushima Univ., TOKUSHIMA, Japan

KAWAKAMI, I. M.Sc., D.Sc., M.I.I.E., Prof. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Organizing substances in tissues. *(Mammalia)*
b. Effects of chemicals on development. *(Amphibia), Gallus* spec., *Mus* spec. *(Amniota)*
c. Special inductive capacities of cancer tissues. *(Amphibia; Mammalia)*
d. Fractionation of inductive agents. *Gallus domesticus (Aves)*

KAWAMURA, T. D.Sc., Prof. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan
a. Hybridization between European and Japanese forms. *(Ranidae, Anura)*
b. Synthesis of amphidiploids. *(Ranidae, Anura)*
c. Synthesis of nucleo-cytoplasmic hybrids between different species. *(Ranidae, Anura)*

KAYE, H. B.A., D.M.D. — Dept. of Pathol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.
a. Structure and development of dentin. *Caiman sclerops (Crocodilia), Homo sapiens (Primates)*

KELLAND, J. L. B.A., M.A., Ph.D. — Dept. of Biol., John Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.
a. Mechanisms of morphogenetic movement: study of organization patterns adopted by gastrula tissues recombined in vitro. *Rana pipiens (Anura)* (in collaboration with M. S. STEINBERG)

KELLY, W. A. B.Sc. — Dept. of Biol. Chemistry (Agric. Biochemistry), Univ. of Aberdeen, ABERDEEN, Scotland

KELSO, A. F. Ph.D. — Dept. of Physiol. and Pharmacol., Chicago College of Osteopathy, 1122 E. 53rd St., CHICAGO, Ill. 60615, U.S.A.
a. Influence of varying percentages of oxygen and nitrogen in the atmosphere on the growth and development of the circulation. *Gallus gallus (Aves)*

KEMP, N. E. Ph.D., M.I.I.E. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.
a. Use of radioactive isotopes as tracers in studies on synthesis of proteins in skin, ovary and digestive tract. *Rana pipiens (Anura)*

b. Electron microscopy of developing oocytes with special reference to the development of yolk and egg membranes (comparative study). *(Invertebrata, Vertebrata)*
c. Changes in the cortical cytoplasm following fertilization. *Fundulus heteroclitus (Teleostei), Rana pipiens (Anura)*
d. Electron microscopic analysis of metamorphic changes in skin, skeleton and other organs. *Rana pipiens (Anura)*
e. Effects of ionizing radiations on submicroscopic structure. *Rana pipiens (Anura)*

KERR, N. S. A.B., M.S., Ph.D., Prof. — Dept. of Zool., Coll. of Biol. Sci., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
a. The morphogenesis of non-flagellated amoeba to flagellated amoeba, of amoeba to gametes, of zygotes to plasmodia, and of plasmodia to fruiting bodies. *Didymium nigripes (Eumycetozoina)*
b. Developmental genetics. *Didymium nigripes (Eumycetozoina)*

KERR, W. E. B.Agr., Ph.D., Prof. — Dept. de Genet., Fac. de Med. de Ribeirão Prêto, RIBEIRÃO PRÊTO, S.P., Brasil
a. Caste determination. *Welipona quadrifasciata (Apidae, Hymenoptera)*
b. Sex determination. *Welipona quadrifasciata, Apis mellifera (Apidae, Hymenoptera)*

KESSLER, D. B.A., M.S., Ph.D. — Dept. of Biol., Haverford Coll., HAVERFORD, Pa., U.S.A.
a. Autoradiographic studies of ribonucleic acid synthesis during the mitotic cycle. *Physarum polycephalum (Myxomycetae)*

KETCHEL, M. M. B.A., M.S., Ph.D. — Worcester Foundation for Exp. Biol., 222 Maple Avenue, SHREWSBURY, Mass., U.S.A.
a. Immunology of pregnancy. *Rattus norvegicus, Mus musculus (Rodentia)*
b. Role of Fallopian tube in development of the ovum. *Rattus norvegicus, Mus musculus (Rodentia)*

KHALIL, S. H. B.Sc., M.Sc. — Dept. of Zool., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt
a. The development of the urogenital system. *Bufo regularis (Anura)* (in collaboration with M. I. MICHAEL and S. N. SEDRA)

KIDO, T. D.Sc., Prof. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan
a. Analysis of mechanism of pharynx-formation. *Dugesia japonica (Turbellaria)*
b. Depigmentation of eye after treatment with thiourea and iodine. *Dugesia japonica (Turbellaria)*
c. Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*
d. Cytological properties of neoblasts. *Dugesia japonica (Turbellaria)*

KIEŁBÓWNA, Miss L. D.Sc. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. The morphogenetic functions of the thyroid gland and hypophysis. *(Amphibia)*
b. Histogenesis of striated muscle. *Xenopus laevis (Anura)*
c. Regeneration. *Bufo bufo (Anura)*

KIENY, Mrs. M. A. SENGEL Dr.ès Sci., M.I.I.E. — Lab. de Zool., Fac. des Sci. de Grenoble, Domaine Universitaire, B.P. 19, SAINT-MARTIN-d'HÈRES 38, France

KIERMAYER, O. Dr.phil. — Inst. für Entw.physiol., Univ. zu Köln, Gyrhofstr. 17, KÖLN-Lindenthal, Deutsche Bundesrepublik
  a. Experimental studies on the developmental pattern. *Micrasterias angulosa (Desmidiaceae)*
  b. Comparative studies on the morphogenetic reaction of different varieties, treated with growth regulating substances. *Lycopersicon esculentum (Solanaceae)*

KIMMEL, D. L., Jr. B.A., M.Sc., M.D., Ph.D. — Div. of Med. Science, Brown Univ., PROVIDENCE, R.I. 02912, U.S.A.
  a. The use of tissue-specific macromolecules to alter the course of embryonic development. *Rana pipiens (Anura)*
  b. Examination of time and tissue specificity of action of tryptophane pyrrolase locus after translocation. *Drosophila melanogaster (Diptera)*
  c. Classification of chromosomal abnormalities in hybrid embryos and in embryos arrested by injection of protein extracts. *Rana pipiens (Anura)*
  d. Determination of developmental potentiality of transplanted embryonic tissues with abnormal chromosomal complements. *Rana pipiens (Anura)*
  e. Characterization of arresting protein extracts. *Rana pipiens (Anura)*
  f. Study of protein synthesis in protein-injected, arresting embryos. *Rana pipiens (Anura)*

KINČURASHVILI, Mrs. N. I. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.
  a. Comparative embryological research of different races. *Gallus gallus (Aves)*

KINDAHL, Miss M. E. Ph.D. — Linnégatan 22, STOCKHOLM Ö, Sweden
  a. The development of the teeth. *(Insectivora)*

KING, Mrs D. WEI B.S., A.M., Ph.D. — Dept. of Anat., Univ. of Iowa, IOWA CITY, Iowa 52241, U.S.A.
  a. Congenital malformations due to maternal vitamin E deficiency. *Mus norvegicus albinus (Rodentia)*
    1. Gross observations on developing abnormal embryos.
    2. Effect of progesterone and estrone.
    3. Effect of gamma-tocopherol supplementation.
    4. Diets and vitamin E teratogeny.
    5. Tocopherol levels in rat tissues.
    6. Antioxidants and vitamin E teratogeny.
    7. Histochemistry of developing embryos.

KING, P. E. B.Sc., Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

KING, T. J. B.S., M.S., Ph.D., M.I.I.E. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A.
  a. Studies on nuclear differentiation in embryos. *Rana pipiens (Anura)*
  b. Transplantation of tumor (Lucké renal adenocarcinoma) nuclei into enucleated eggs. *Rana pipiens (Anura)* (in collaboration with Miss M. A. Di BERARDINO)

KINOSHITA, S. Ph.D. — Embryol. Section, Dept. of Biol., Fac. of Sci., Ochanomizu Univ., Otsuka-machi, Bunkyo-ku, TOKYO, Japan
  a. Mechanism of flagellar movement. *Hemicentrotus pulcherrimus (Echinoidea)*
  b. Mechanism of cell division in fibroblast. *(Vertebrata)*

KIORTSIS, V. Dr.ès Sci., Prof. — Zool. Lab. and Museum, Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece
  a. Protein electrophoresis of serum and of regenerating tissues. *(Urodela; Lacertilia)*
  b. Histochemical and microautoradiographic study of the regeneration cells and the nervous system in limb and caudal regeneration. *(Urodela; Lacertilia; Mammalia)*

KIRBY, D. R. S. B.Sc., M.A., D.Phil. — Dept. of Zool., Parks Rd., OXFORD, England
  a. Development and physiology of placental tissues, especially the trophoblast. *Mus* spec. *(Rodentia)*

KIRCHEN, R. V. B.S., M.S. — Carolina Biol. Supply Co., BURLINGTON, N.C., U.S.A.
  a. Hydrocortisone effect on connective tissue development in vivo; histochemical and autoradiographic studies. *Gallus domesticus (Aves)*

KIRRMANN, J.-M. Dr.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
  — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
  a. L'influence protectrice de la cystéamine et de différentes substances chimiques contre l'action tératogène des rayons X.
  b. Action des rayons X sur le métabolisme d'organes embryonnaires cultivés in vitro. *Gallus gallus (Aves)*

KISHIDA, Y. B.Sc. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi-1, KANAZAWA, Japan
  a. Depigmentation of eye after treatment with thiocarbamide and its derivatives. *Dugesia japonica (Turbellaria)*
  b. Mechanisms of eye formation during regeneration. *Dugesia japonica (Turbellaria)*
  c. Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*
  d. Ultrastructure of neoblast. *Dugesia japonica (Turbellaria)*

KLEIN, N. W. B.A., Ph.D. — Dept. of Biol., Marquette Univ., 1217 West Wisconsin Ave., MILWAUKEE, Wis. 53233, U.S.A.
  a. Protein metabolism and its relationship to growth and differentiation in the explanted embryo. *Gallus* spec. *(Aves)*
  b. Mechanisms of teratogenic specificity in the explanted embryo. *Gallus* spec. *(Aves)*

KLEIN, R. L. B.A., M.A., Ph.D., Prof. — Dept. of Pharmacol., Univ. of Mississippi Med. Center, JACKSON, Miss., U.S.A.
  a. Ontogenesis of electrolyte metabolism in embryonic heart; whole heart, subcellular fractions, actomyosin. *Gallus domesticus (Aves)*

KLEISS, E. Dr.Med., F.R.M.S., Prof. — Dept. of Embryol., Fac. de Ci. Med., Univ. de Los Andes, MÉRIDA, Venezuela
  — personal address: Apartado 38, MÉRIDA, Venezuela
  a. Development of the tongue and other organs of the mouth; teratology. *Homo sapiens (Primates)*
  b. Development and functional anatomy of mammary gland. *Homo sapiens (Primates)*
  c. History of embryology.

KLIMA, M. Dr. — Dept. of Morphol., Inst. of Vertebrate Zool., Czechoslovak. Acad. of Sci., Drobného 28, BRNO, Czechoslavakia

a. Morphogenesis of the sternum and shoulder girdle. *Rhinolophus hipposideros, Plecotus austriacus, Eptesicus serotinus, Myotis myotis, Miniopterus schreibersi (Chiroptera)*

KLOFT, W. Dr.rer.nat., Prof. — Inst. für Angewandte Zool. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik

a. Pathology of development after irradiation. *(Aphidae, Hemiptera)*

KNIGHT-JONES, E. W. B.Sc., D.Phil., Prof. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

KNOX, W. E. M.D. — Cancer Research Inst., New England Deaconess Hosp., 194 Pilgrim Road, BOSTON 15, Mass., U.S.A.

KOBAYASHI, N. M.Sc. — Biol. Lab., Doshisha Univ., Kamikyoku, Karasuma Imadegawa, KYOTO, Japan

a. Cytological analysis of developing heart. *Triturus pyrrhogaster (Urodela)*

KOBAYASI, H. Dr. — Biol. Lab., Japan Women's Univ., Takata, Toyokawacho, Bunkyo-ku, TOKYO, Japan

a. On the mechanism of fertilization and development in hybridization. *(Teleostei)*

b. The storage of sperm by freezing. *(Teleostei)*

KOCHAV, Sh. B.Sc. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel

a. An autoradiographic study of cell movements in the very young blastoderm. *Gallus domesticus (Aves)*

KOCHER (BECKER), Mrs. U. Dr.rer.nat., M.I.I.E. — Heiligenberg-Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik

a. Determination of undetermined ectoderm in solutions of inducing substances. *Triturus alpestris (Urodela)*

b. Effects and mechanisms of the mesodermal inducing factor. *Triturus alpestris, Ambystoma mexicanum (Urodela)* (in collaboration with H. TIEDEMANN, Wilhelmshaven)

KOCHER, W. Dr.phil., M.I.I.E. — Zool. Inst. der Univ., Röntgenring 10, 87 WÜRZBURG, Deutsche Bundesrepublik

— Heiligenberg-Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik

a. Phase specificity of effects of TEM treatment in late embryonic stages. *Triturus alpestris (Urodela), Gallus domesticus (Aves), Mus musculus (Rodentia)*

b. Pattern formation in limbs of the polydactyly mutant. *Mus musculus (Rodentia)*

c. Hereditary deafness in the surdescens mutant. *Mus musculus (Rodentia)*

d. Role of the brain in the axial stretching of the embryo. *Trutta fario (Teleostei)*

e. Untersuchungen über den Einfluss radiomimetischer Substanzen auf die Differenzierung der Extremitätenanlagen. *Gallus domesticus (Aves), Mus musculus (Rodentia)* (in Zusammenarbeit mit G. TÖNDURY, Zürich)

KOCHHAR, Miss D. M. B.Sc., M.Sc., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Fla., U.S.A.
— temporarily: Karolinska Institute, STOCKHOLM, Sweden
a. Histochemistry and autoradiography of artificially produced congenital malformations; biochemical events preceding morphogenesis. *Rattus rattus (Rodentia)*
b. Morphology and synthetic abilities of mesenchymal cells in abnormally developing embryos. *Rattus rattus (Rodentia)*

KOCK, J. M. de M.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
a. Ontogenesis of the chondrocranium. *Melopsittacus undulatus (Psittaci, Aves)*

KOECKE, H.-U. Dr.phil., Prof. — Zool. Inst. der Univ., Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik
a. Determination von Neuralleistenzellen und Derivaten. *Anas domestica (Aves)*
b. Entwicklungsphysiologie der Feder und embryonale Pterylose. *Anas* spec., *Columba* spec., *Gallus domesticus (Aves)*
c. Neuralleistenentwicklung und Pigmentierung. *Anas* spec. *(Aves)*
d. Identifizierung von Melanoblasten und Melaningenese. *Anas domestica (Aves)*
e. Krebsproblem als entwicklungsphysiologisches Problem. *Columba* spec. *(Aves)*, *Mus* spec. *(Rodentia)*

KOELLE, G. B. M.D., Prof. — Dept. of Pharmacol., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

KOHONEN, P. J. Ph.D. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.

KOJIMA, M. K. M.A., D.Sc. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, Japan
a. Physiological studies on the cleavage of eggs. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)*

KOLLROS, J. J. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Iowa, IOWA CITY, Iowa 52240, U.S.A.
a. Influence of thyroid hormones upon limb regeneration in tadpoles. *Bufo americanus, Pseudacris nigrita, Rana pipiens (Anura)*
b. Tissue responses and control of sequence in metamorphosis. *Rana pipiens, R. catesbeiana, Pseudacris nigrita, Ambystoma jeffersonianum (Amphibia)*
c. Development of spinal and cerebral centers. *Rana pipiens, R. catesbeiana, Pseudacris nigrita, Bufo americanus (Anura)*

KONIECZNA (MARCZYŃSKA), Mrs. B. Ph.D. — Dept. of Biol. and Embryol., Acad. of Med., ul.Kopernika 7, KRAKÓW, Poland

KONIGSBERG, I. R. A.B., Ph.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md.21210, U.S.A.
— Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE 18, Md., U.S.A.

KONIJN, Th. M. Ph.D. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands
a. Chemotaxis, cell aggregation and differentiation. *(Acrasiales)*

KONOPACKA, Mrs. B. Dr., M.V.S.S., Prof.(Emer.) — Veter. Inst. of Histol. and Embryol., High School of Agricult., Grochowska 272, WARSZAWA, Poland

a. The sequence of some substances in the development and function of the embryonic mesonephros. *Sus domestica (Artiodactyla)*
b. The role of the nucleolus in oogenesis. *(Annelida)*
c. The residual substance of the dissolving nucleus in the oocyte before maturation division. *Nereis diversicolor (Annelida)*

KONYUKHOV, B. V. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.

a. Developmental study of mutational effects of genes which lead to eye and skeletal abnormalities. *Mus musculus (Rodentia)*
b. Study of lens proteins by electrophoresis. *Mus musculus (Rodentia)*
c. Study of mechanisms of eye and skeletal abnormalities by organ culture. *Mus musculus (Rodentia)*
d. Methods for the prevention of some inherited abnormalities by administering drugs. *Mus musculus (Rodentia)*

KORKIA (NIJARADZE), Mrs. I. K. Cand.biol.sci. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

a. Experimental research of the lens-forming properties. *(Anura)*
b. Influence of Pasteurelose on the immunological reaction of the embryo. *Gallus gallus (Aves)* (in collaboration with Mrs. L. KURULASHVILI)

KORN, H. F. Dr.rer.nat. — Zool. Inst. der Univ., Hegewischstr. 3, 23 KIEL, Deutsche Bundesrepublik

a. The postlarval brain. *(Polychaeta)*
b. Development of nervous system. *(Coelenterata)*

KORNELIUSSEN, H. K. — Anat. Inst., Univ. of Oslo, OSLO, Norway

a. Development of inferior olive. *Balaenoptera physalus, B. musculus (Cetacea)* (in collaboration with J. JANSEN)
b. Development and homology of the cerebellar nuclei. *Balaenoptera physalus, B. musculus (Cetacea)* (in collaboration with J. JANSEN)
c. Regional variations during the development of the cerebellar cortex. *Balaenoptera physalus, B. musculus (Cetacea)*

KOROTCHKIN, L. I. Cand.med.sci. — Inst. of Cytol. and Genet., NOVOSIBIRSK 72, U.S.S.R.

a. Experimental morphology, cytochemistry and cytophysiology of the developing nervous system. *Ambystoma mexicanum (Urodela), Rattus norvegicus, Mus musculus (Rodentia)*

KOROTKOVA, Mrs. G. P. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.

a. Comparative study of the processes of regeneration, asexual reproduction and somatic embryogenesis. *Leucosolenia complicata, Sycon lingua, Halichondria panicea* and other spp. *(Porifera)*
b. Comparative study of the processes of regulation in the anterior extremity in four- and five-day old embryos. *Gallus domesticus (Aves)*

KOŚCIELSKI, B. D.Sc. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland

a. Morphogenetic functions and histophysiology of the thyroid gland and hypophysis. *Triturus* spec. *(Urodela)*

b. Descriptive and experimental embryology. *Dendrocoelum lacteum (Planariidae, Turbellaria)*

KOSHELEV, B. V. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

KOSHIDA, Y. M.Sc., D.Sc. — Dept. of Biol., Nara Med. Univ., Kashihara, NARA, Japan
a. Cytological studies on the presence of recognizable sex-associated differences. *Gallus domesticus, Coturnix coturnix japonica, Meleagris gallopavo (Aves)*
b. Histochemical studies on developing photoreceptors. *Lymnaea* spec., *Euhadra* spec., *Limax* spec. *(Pulmonata), Monodonta* spec., *Conomurex* spec., *Littorina* spec. *(Prosobranchia, Gastropoda)*

KOSIN, I. L. Ph.D., Prof. — Lab. of Developm. Genet., Dept. of Animal Sciences, Washington State Univ., PULLMAN, Wash., U.S.A.
a. Developmental genetics in relation to reproduction and growth. *Meleagris gallopavo, Gallus domesticus (Aves)*
b. Cytological sex-dimorphism. *Meleagris gallopavo, Gallus domesticus, Coturnix coturnix (Aves)*

KOSTOMAROVA, Mrs. A. A. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
a. Differentiation of the isolated blastoderm cultivated in different media. *Misgurnus fossilis (Cobitidae, Teleostei)*

KOTANI, M. M.Sc. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
a. Differentiation mechanism of germ cells. *(Urodela; Aves)*
b. Immunological studies on the nature of male and female. *Mus musculus (Rodentia)*

KOWSARIAN — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Développement de l'épiphyse. *Homo sapiens (Primates)*

KRAFT, A. von Dr.rer.nat. — Heiligenberg-Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik
a. Auslösung von Situs inversus durch strahlenbedingte Defekte. *(Urodela)*

KRAMER, J. P. B.S., M.S., Ph.D., Prof. — Dept. of Entomol. and Limnol., Cornell Univ., Comstock Hall, ITHACA, N.Y. 14850, U.S.A.
a. Morphological development of entomophilic forms. *Octosporea muscaedomesticae (Microsporidia, Sporozoa)*
b. Pathogenesis of octosporeosis. *Phormia regina, Musca domestica (Diptera)*

KRANTZ, Mrs. H. Dr.med. — Anat. Inst. der Univ. Rostock, Gertrudenstr. 9, 25 ROSTOCK 1, Deutsche Demokratische Republik
a. Reaktion der Zellkerne von Epithelkulturen auf Colchizin.
b. Einfluss des Alters einer Kultur auf die Zellkerngrösse.
c. Der Zellkern im Organismus und im Explantat.
d. Fettbildung im Explantat.
e. Development of the Hortega-cells.

KRAUS. R. MUDr. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
  a. Effects of cytostatics on early development of eggs. *Mus musculus, Mus rattus (Rodentia)*

KRAUSE, G. Dr.phil., M.I.I.E., Prof. — Zool. Inst. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik
— Heiligenberg Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik
  a. Experimentell erzeugte Duplicitas cruciata. *Tachycines asynamorus (Orthoptera)*
  b. Analyse der Keimanlagenbildung. *Bombyx mori (Lepidoptera)*
  c. Vergleichende Embryonalentwicklung. *(Insecta)*
  d. Kultur embryonaler Gewebe. *(Insecta)*

KREDIET, P. D.V.M. — Veter. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands
  a. Ontogenetic malformations of the great vessels in neonates and adults. *(Mammalia)*
  b. Development of the heart. *(Mammalia)*

KRETCHMER, N. Ph.D., M.D., Prof. — Dept. of Pediatrics, Stanford Univ. School of Med., PALO ALTO, Calif., U.S.A.
  a. Developmental enzymology: 1. Disaccharidases in developing intestine. 2. Pyrimidine biosynthesis in the fetal heart. *Rattus norvegicus (Rodentia), Zalophus californianus (Phocidae, Carnivora)*

KRITCHINSKAYA, Miss E. B. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.
  a. Process of implantation in connection with the problem of embryonic immunity. *Rattus rattus albinus (Rodentia)*

KROEGER, H. P.D., Dr.rer.nat. — Zool. Inst. der Eidg. Techn. Hochschule, Universitätsstr. 2, ZÜRICH, Schweiz
  a. Developmental metabolism of salivary gland chromosomes. *Chironomus thummi (Diptera)*
  b. Developmental genetics of pattern formation. *Drosophila melanogaster (Diptera)*

KRONE, H. A. Dr.med. — Staatliche Frauenklinik und Hebammenschule, Markusplatz 3, 86 BAMBERG, Deutsche Bundesrepublik
  a. Placental pathology. *Homo sapiens (Primates)*
  b. Causal etiology of malformations. *Homo sapiens (Primates)*

KROPP, B. N. A.M., Ph.D. Prof. — Dept. of Anat., Ghana Med. Sch., P.O. Box 4236, ACCRA, Ghana

KRZANOWSKA (DATKÓWNA), Mrs. H. Ph.D. — Dept. of Anim. Genet. and Organic Evolution, Jagiellonian Univ., Krupnicza 50, KRAKÓW 2, Poland
  a. Studies of heterosis: sperm characters, fertilization and cleavage rate in inbred and crossbred animals. *Mus musculus (Rodentia)*

KRZYSZTOFOWICZ, Miss A. D.Sc. — Zool. Dept., Jagiellonian Univ., ul. Krupnicza 50, KRAKÓW, Poland
  a. Descriptive embryology. *(Curculionidae, Coleoptera)*
  b. Histochemical studies on development. *Melasoma populi (Coleoptera)* (in collaboration with Cz. JURA and Miss B. WĘGLARSKA)

KUCIAS, J. Ph.D. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland

a. The causes and mechanisms of blastematic regeneration.
b. The connections between regeneration and cancerogenesis.

KUDOKOTZEV, V. P. B.Sc. — Dept. of Biol., Kharkov State Univ., Dzerjinsky Square 4, KHARKOV, U.S.S.R.

a. Experimental investigations in limb regeneration. *(Vertebrata)*

KÜHN, A. Dr.phil.h.c., Dr.rer.nat., Dr.med.h.c., M.I.I.E., Prof. (Emer.) — Max Planck Inst. für Biol., Spemannstr. 34, TÜBINGEN, Deutsche Bundesrepublik

(no embryological work in progress)

KUHN, O. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik

a. Hormonwirkungen in der Morphogenese.
b. Entwicklungsphysiologie der Feder. *(Aves)*
c. Wirkungsweise carcinogener und anderer Substanzen auf tierische Gewebe.
d. Regeneration und Wundheilung.

KULANGARA, A. C. M.A., Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland

a. An investigation of the genetic and antigenic differences among spermatozoa, using immunological techniques. *Lepus* spp. *(Lagomorpha)*

KUŃSKI, H. M.D. — Inst. of Histol. and Embryol., Acad. of Med., Narutowicza 60, ŁÓDŹ, Poland

KURAHASHI, K. — Biol. Lab., Osaka Dental Univ., Saka, HIRAKATA, Osaka Pref., Japan

a. Haemoglobin formation in ontogeny. *(Aves)*
b. Immunological properties of haemoglobin. *(Aves)*

KUROMIYA, Miss N. B.Sc. — Res. Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan

a. Effects of some chemical substances upon the embryo. *Mus musculus, Rattus norvegicus (Rodentia)* (in collaboration with U. MURAKAMI and Y. KAMEYAMA)

KURU, M. M.D. — National Cancer Center Hospital, Tsukiji 5 chome, Chuoku, TOKYO, Japan

a. Studies on a growth promoting substance (oncotrephin) from cancer tissues.
   1. Isolation and purification of oncotrephin from human malignant tissues.
   2. Effect of oncotrephin upon DNA synthesis of Escherichia coli, K-12 strain and strain L cells.
b. Isolation of an oncotrephin-like substance from regenerating liver. *Rattus* spec. *(Rodentia)*
c. Isolation of growth-promoting substance(s) from embryo extracts. *Gallus* spec. *(Aves)*

KURULASHVILI, Mrs. L. I. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

a. Influence of Pasteurelose on the immunological reaction of the embryo. *Gallus gallus (Aves)* (in collaboration with Mrs. I. R. KORKIA)

KUUSI, Miss T. K. Dr.Phil., M.I.I.E. — Lab. of Exp. Embryol., Dept. of Physiol. Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland (no embryological work in progress)

KVINIKHIDZE (CICISHVILI), Mrs. G. S. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.
  a. Cytological and histochemical research on eye development. *(Aves)*
  b. Cytophotometry of DNA in the eye rudiment. *(Aves)*
  c. Influence of bacteria on embryonic nerve tissue. *(Aves)*

KYÔNO, Mrs. H. N. B.A. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan
  a. Localization of ATP-ase and protein-bound-SH in the ova. *Hemicentrotus pulcherrimus (Echinoidea)*

LABORDUS, V. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
  a. Effects of U.V. irradiation on early developmental stages. *Limnaea stagnalis (Gastropoda)*

LaCHANCE, L. E. A.B., M.S., Ph.D. — Metabolism and Radiat. Res. Lab., State Univ. Station, FARGO, N.D. 58103, U.S.A.
  a. Studies on the genetic effects of chemical mutagens; cytopathology of nurse cell nuclei, oogenesis and developmental pathology of treated ova. *Cochliomyia hominivorax (Diptera)*
  b. Cytopathological effects of radiation treatments and chemosterilant treatments on reproductive cells; effects on embryos derived from treated gametes. *Musca domestica (Diptera)*

LA CROIX, L. J. B.S.A., M.Sc., Ph.D. — Dept. of Plant Science, Univ. of Manitoba, WINNIPEG, Manitoba, Canada
  a. Factors affecting embryonic growth and differentiation. *Hordeum vulgare (Graminaeae)*

LACY, D. Dr. — Dept. of Zool. & Comp. Anat., St. Bartholomew's Med. Coll., Charterhouse Square, LONDON E.C.1, England
  a. Spermatogenesis. *(Mammalia)*

LA GRECA, M. Dr.nat. sci., Prof. — Ist. di Zool. dell'Univ., Via Androne 81, CATANIA, Italia
  a. Istologia e citologia delle gonadi, con particolare riferimento alla vitellogenesi. *(Orthoptera)*

LAGUCHEV, S. S. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.

LAHIRI, D. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India
  a. Physiology of cell contact. *(Porifera)* (in collaboration with S. MOOKERJEE, B. GANGULY and Miss S. MAKHIJA)
  b. Induced changes. *(Porifera)* (in collaboration with S. MOOKERJEE)

LAKSHMANAN, K. K. M.A., M.Sc., Ph.D. — Inst. für spezielle Botanik, Univ. Mainz, 65 MAINZ, Deutsche Bundesrepublik
  a. Descriptive and experimental embryology. *(Plantae)*

LAKSHMI, Miss M. S. B.Sc., B.Sc. (Hons.), M.Sc., Ph.D. — Entwicklungsgeschichtl. Abt., Zool. Inst. der Univ., Poppelsdorfer Schloss, 53 BONN, Deutsche Bundesrepublik
  a. Effects of female hormones on embryonic development (biochemistry). *Gallus gallus (Aves)*

LALLIER, R. A. Dr.ès Sci., M.I.I.E. — Station Zoologique, VILLEFRANCHE-sur-Mer (A.M.), France

LAMBIOTTE, M. G. D. Dr.ès Sci. — Centre de Recherches sur la Nutrition du C.N.R.S., 9 Rue Emile, BELLEVUE (Seine et Oise), France
  a. Biochemical differentiation of embryonic liver; formation of bile acids; enzymes involved; organ and tissue culture. *Rattus norvegicus, Cavia cobaya, Mesocricetus auratus (Rodentia), Oryctolagus cuniculus (Lagomorpha), Sus scrofa (Artiodactyla)*

LAMONT, Miss D. M. M.A. — Dept. of Chemistry, Univ. Coll. London, Gower St., LONDON W.C.1, England
  a. The study of various proteins in the growth of cells in tissue culture. *Gallus domesticus (Aves)* (in collaboration with G. A. VERNON, D. V. BANTHORPE and B. BANKS)

LAMPRECHT, de V. B. B.Sc. — Dept. of Anatomy, Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
  a. Experimental studies on the origin of the skeletal structures of the metotic region. *Gallus domesticus (Aves)*

LANDAUER, W. Ph.D., M.I.I.E., Prof. — Dept. of Zool. and Comp. Anat., Univ. Coll., Gower Street, LONDON W.C.1, England
  — private address: 16 Highgate Ave., LONDON N.6, England
  a. Developmental studies on various mutants, such as "creeper", "nanomelia", Lamoureux's chondrodystrophy etc. *Gallus domesticus (Aves)*
  b. A causal analysis of teratogenic action of insulin and other chemical compounds on developing embryos. *Gallus domesticus (Aves)*
  c. The nature and significance of phenocopies. *Gallus domesticus (Aves)*
  d. The genetic role of sporadic variations. *Gallus domesticus (Aves)*

LANDESMAN, R. M.S. — Dept. of Zool., Univ. of British Columbia, VANCOUVER 8, B.C., Canada.
  a. Analysis of the role of tissue environment during neurogenesis. *Taricha torosa, Amblystoma gracile (Urodela)* (in collaboration with C. V. FINNEGAN)

LANFRANCHI, A. Dr.Biol.Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
  a. Action of gamma- and X-rays on development. *(Planariidae, Turbellaria)*

LANGMAN, J. M.D., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.
  a. Influence of antibodies and antigens on growth and development. *Gallus domesticus (Aves)*
  b. Immuno-embryological research into eye development. *Gallus domesticus (Aves)*
  c. Autoradiographic analysis of brain development under normal and abnormal conditions. *Gallus domesticus (Aves), (Rodentia)*

LANOT, R. Lic.ès Sci. — Lab. de Zool. Génér., Fac. des Sci. de Nancy, 30 Rue Ste Cathérine, NANCY, France
  a. Malformations axiales: analyse causale de l'action tératogène du bleu trypan et de la RNA-se. *Gallus gallus (Aves)*

LANZAVECCHIA, G. Dr., Prof. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italia
  a. Oogenesis. *(Amphibia)*

LARAMBERGUE, M. de Dr.ès Sci., Prof. — Lab. de Zool. et Biol. anim., Fac. des Sci., POITIERS, Vienne, France

LASHER, R. S. B.A., M.A. — Dept. of Zool., Columbia Univ., 908 Schermerhorn Hall, NEW YORK, N.Y. 10027, U.S.A.
  a. Determination of the times of competence for neural and neural crest inductions by Li-ion in vitro. *Rana pipiens (Anura)*

LA SPINA, Miss R. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
  a. Cytochemical investigations on eggs. *(Ascidiae)*
  b. The analysis of the colour pattern. *Discoglossus pictus (Anura)*
  c. Analysis of embryonic development. *(Ctenophora)*

LASSAU, J. P. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
  a. Développement du foie. *Homo sapiens (Primates)*

LATIMER, H. B. Ph.D., Prof.(Emer.) — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas 66045, U.S.A.

LATSHAW, W. K. D.V.M., M.Sc. — Dept. of Veter. Anat., Ohio State Univ., 1900 Coffey Rd., COLUMBUS 10, Ohio, U.S.A.
  a. Morphogenesis of hereditary blindness. *Canis familiaris (Carnivora)*

LAUFER, H. B.S., M.A., Ph.D. — Dept. of Zool. and Entomol., Univ. of Connecticut, STORRS, Conn., U.S.A.

LAVALLE, D. B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil
  a. Cytochemical study on the primary gonocytes. *(Aves)*

LAVARACK, J. O. M.B., B.S., Ph.D. — Dept. of Anat., Univ. of Melbourne, PARKVILLE, N.2, Victoria, Australia
  a. Histochemical investigation of early neural, notochordal and related tissues. *Gallus gallus (Aves)*

LaVELLE, A. B.S., M.A., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.
  a. Cytodifferentiation of neurons. *Cavia cobaya, Cricetus auratus (Rodentia)*
  b. Critical periods in neuronal maturation. *Cricetus auratus (Rodentia)*
  c. Total lipid and phospholipid changes during neuronal maturation. *Cricetus auratus (Rodentia)*
  d. Immunochemical characteristics of developing brain. *Cricetus auratus (Rodentia)*
  e. Immunochemical characteristics of developing lens tissue. *Gallus gallus (Aves)*

LaVELLE (WILSON), Mrs. F. B.A., M.A., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.
  a. Hormonal control of early sex differentiation. *Cricetus auratus (Rodentia)*
  b. Critical periods in neuronal differentiation. *Cricetus auratus (Rodentia)*
  c. Cytochemical differentiation of nervous tissue. *Cricetus auratus (Rodentia)*

LAWRENCE, I. — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas 66045, U.S.A.

LAWSON, Miss K. A. Ph.D. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a. Morphogenesis and functional development of the parotid gland, in vivo and in vitro. *Rattus rattus (Rodentia)*
b. Response of embryonic limb-bone rudiments to thyroid hormones in vitro. *Gallus domesticus (Aves)*

LAZARD (HAUBEN), Mrs. L. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
a. Limb regeneration, after X-irradiation, and grafts of various tissues and organs. *Siredon mexicanum (Urodela)*

LEACH, Ch. M. B.S., B.Agr., Ph.D. — Dept. of Botany & Plant Pathol., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.
a. Light-induced sexual and asexual reproduction. *(Fungi)*

LEATHEM, J. H. Ph.D. — Rutgers Univ., NEW BRUNSWICK, N.J., U.S.A.

LEBLOND, C. P. M.D., Ph.D., Prof. — Dept. of Anat., McGill Univ., MONTREAL, Quebec, Canada
a. Development of the thyroid gland. *(Vertebrata)*
b. The development of bones and teeth as shown on radioautographs with the help of radio-carbon-containing substances. *(Vertebrata)*

LECHENAULT, H. — Lab. de Biol. génér., Fac. des Sci., B. P.347, REIMS (Marne), France
a. Cytochemistry of cellular differentiation in cephalic regeneration. *(Oligochaeta)*

LE DOUARIN, G. H. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Action des rayons X sur la physiologie et le développement du coeur embryonnaire. *Gallus gallus (Aves)*
b. Electrophysiologie du coeur embryonnaire. *Gallus gallus (Aves)*
c. Métabolisme des organes embryonnaires en culture in vitro.

LE DOUARIN (CHAUVAC), Mrs. N. M. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Etude expérimentale du développement du tube digestif. *Gallus gallus (Aves)*
b. Etude expérimentale du développement du foie. *Gallus gallus (Aves)*

LEES, A. D. M.A., Ph.D. — A.R.C. Unit. of Insect Physiol., Dept. of Zool., Downing St., CAMBRIDGE, England
a. Control of polymorphic development, with special reference to environmental factors. *Megoura viciae (Aphididae, Homoptera)*

LEESON, C. R. M.A., M.D., M.B., B.Chir., Prof. — Dept. of Anat., Coll. of Med., Univ. of Iowa, IOWA CITY, Iowa 52241, U.S.A.
a. Postnatal development and differentiation of interstitial tissue of the testis. *Rattus rattus (Rodentia)*
b. Postnatal development of the "boundary tissue" of the seminiferous tubule. *Rattus rattus (Rodentia)*

LEFFORD (FERNANDO), Mrs. F. M.B.B.S., Ph.D. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Studies on cell locomotory behaviour in tissue culture. *Gallus domesticus (Aves), Cavia* spec. *(Rodentia)*

LEGAIT, E. J. Prof. — Lab. d'Histol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

a. Study of pars intermedia of hypophysis (including histophysiology). *(Mammalia)*

LEGAULT, R. O. B.A., M.S., Ph.D., Prof. — Dept. of Biol., Univ. of Ottawa, OTTAWA, Ontario, Canada

LEGAY, J. M. Dr.ès Sci., Prof. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Modifications de l'héritabilité en fonction du développement ou des conditions de ce dernier. *Drosophila melanogaster (Diptera), Bombyx mori (Lepidoptera)*

LEGENDRE, R. Dr.rer.nat., Dr.ès Sci., Prof. — Lab. de Zool., Fac. des Sci., Chemin des Brusses, MONTPELLIER (Hérault), France

a. Développement embryonnaire et post-embryonnaire. *Archaea* spec. *(Araneidae, Arachnoidea)*

LEGHISSA, S. Ph.D., M.I.I.E., Prof. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia

a. Problems of neurogenesis of the optic tectum (including in vitro studies). *Gallus domesticus (Aves)*

LEGNAME, A. H. Dr. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289, TUCUMAN, Argentina

— temporarily: Istituto di Zoologia, ROMA, Italia

a. Oxidative reserve in early development. *Bufo arenarum (Anura)*

b. Catalase in early development. *Bufo arenarum (Anura)*

c. Cytochromes in early development. *Bufo arenarum (Anura)*

LEGNAME, C. R. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289, TUCUMAN, Argentina

a. Nuclear transplantation (early stages until neurulation). *Bufo arenarum (Anura)*

LE GOASCOGNE, C. Lic.ès Sci., Dipl.d'Etudes Sup. — Inst. Natl. de la Santé et de la Recherche Méd., Unité de Physiol. placentaire, Hôpital St. Antoine, 184 Rue du Faubourg St.-Antoine, PARIS XIIe, France

a. Anatomie vasculaire et physiologie de la vésicule ombilicale. *Rattus norvegicus albinus, Cavia cobaya (Rodentia)*

LEGRAND, J.-J. Dr.ès Sci., Prof. — Lab. de Zool. et Biol. anim., Fac. des Sci., POITIERS, Vienne, France

LEHMAN, H. E. M.A., Ph.D., M.I.I.E. — Dept. of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.

LEHMAN, Mrs. L. M. YOUNGS M.A, PhD — Dept of Zool., Univ. of North Carolina, CHAPEL HILL, N.C., U.S.A.

LEHMANN, F. E. Dr. Phil., M.I.I.E. Prof. — Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

LEIKOLA, A. H. A. Ph.D. — Lab. of Exp. Embryol., Dept. of Physiol. Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland

— temporarily: Dept. of Biol., Temple Univ., PHILADELPHIA 22, Pa., U.S.A.

a. The competence of gastrula ectoderm. *Triturus vulgaris (Urodela)*

LE'JOHN, H. E. B. B.Sc., Ph.D. — Fourah Bay Coll., Univ. Coll. of Sierra Leone, FREETOWN, Sierra Leone, W. Africa
  a. Macromolecular differentiation of unicellular motile zoospores into unicellular non-motile plants (electron microscopy, biochemistry, tracer studies). *Rhizophlyctis rosea (Chytridiomycetes, Phycomycetes)*

LEMEŽ, L. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
  a. Embryonal haematology. *Gallus domesticus (Aves)*
  b. Experimental morphology of the pneumogastric system. *Gallus domesticus (Aves)*

LENDER, Th. M.I.I.E., Prof. — Lab. de Biol. Anim., S.P.C.N., Univ. de Paris, Fac. des Sci. d'Orsay, ORSAY (S. & O.), France
  a. Problèmes de la régénération: substances inductrices et inhibitrices. *(Planariidae, Turbellaria)*
  b. Neurosécrétion. *(Planariidae, Turbellaria)*
  c. Régénération. *Asterina gibbosa (Asteroidea, Echinodermata)*
  d. Culture in vitro d'organes larvaires. *Galleria* spec. *(Lepidoptera)*. *Periplaneta* spec. *(Orthoptera)*
  e. Culture in vitro de gonades larvaires males et femelles. *Galleria mellonella (Lepidoptera)*

LENICQUE, P. M. Ph.D. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
  a. Natural inhibitory and promotory agents during regeneration. *(Hydroidea)*
  b. Dynamics of cells during regeneration. *(Hydroidea)*

LENNEP, E. W. van M.Sc. — Dept. of Histol. and Embryol., Univ. of Sydney, SYDNEY, N.S.W., Australia

LENSKY, Y. M.Sc., Ph.D. — Fac. of Agric., Hebrew Univ. of Jerusalem, P.O.B. 12, REHOVOTH, Israel
  a. Changes occurring in proteins of haemolymph during metamorphosis. *Apis mellifica* var. *ligustica (Hymenoptera)*
  b. Separation, characterization and identification of proteins of haemolymph, in three castes and in two races. *Apis mellifica* var. *ligustica (Hymenoptera)*

LENZ, W. M.D., Prof. — Inst. f. Humangenetik der Univ. Hamburg, HAMBURG, Deutsche Bundesrepublik
  a. Analysis of thalidomide embryopathy in relation to time of intake. *(Mammalia)*
  b. Analysis of malformations associated with maternal diabetes. *Homo sapiens* (and other *Mammalia)*
  c. Correlation of morphology with specific maternal history. *Homo sapiens (Primates)*

LEONARDI, Miss G. Ph.D. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, PALERMO, Italia
  a. Hatching enzymes. *(Mollusca; Ascidiae)*
  b. Quantitative determinations of proteolytic activities in development. *(Ascidiae)*

LEONE, V. M.D., M.I.I.E. — Catt. di Embriol. e Morfol. Sper., Univ. di Milano, Via Celoria N.10, MILANO, Italia

- a. Study of the effects of thalidomide on embryos and on adult osteogenesis. *Gallus gallus, Columba livia (Aves)*
- b. Induction of tumors by methylcholantrene; homo- and heterospecific transplants; tumorigenic activity of acellular extracts and of nucleic acids from these tumors. *Triturus cristatus, Xenopus laevis, Pleurodeles waltlii (Amphibia)*

LEPORI, N. G. Prof. — Ist. di Biol. e Zool. gener., Univ. di Sassari, SASSARI, Sardegna, Italia

- a. Research on the origin of the asymmetry of the female gonad (blastoderm in vitro). *(Aves)*
- b. Research on the origin of asymmetrical heart development (blastoderm in vitro). *Gallus* spec., *Anas* spec. *(Aves)*

LESSEPS, R. J., S. J. B.S., Ph.D. — Res. Inst. for Nat. Scis., Woodstock College, WOODSTOCK, Md. 21163, U.S.A.

- a. Developmental genetics of cell movements in embryos studied by reaggregation of dissociated cells. *Drosophila melanogaster (Diptera)*
- b. Electron microscopy of dissociated and reaggregating embryonic cells. *Gallus domesticus (Aves)*

LEUSSINK, J. A. M.Sc. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands

- a. Distribution of inductive capacity in the archenteron-roof and in the overlying neural plate (explantation experiments). *(Urodela)*

LEVAK (SVAJGER), Mrs. B. D.Sc. — Inst. of Biol., Fac. of Med., ZAGREB, Šalata, Yugoslavia

- a. Investigation of differentiation of the embryo in the anterior chamber of the eye and in vitro. *Rattus norvegicus albinus (Rodentia)* (in collaboration with N. SKREB)

LEVENE, C. M.D., B.Ch., B.A.O. — Anat. Dept., Univ. of the West Indies, KINGSTON, Jamaica, West Indies

- a. Blood vessels of developing cartilaginous epiphysis; histological and histochemical, and radioisotope study with ^{35}S and ^{3}H-thymidine. *(Mammalia)*
- b. Growth of cartilage as exemplified by cricoid cartilage; ^{35}S and ^{3}H-thymidine study. *(Mammalia)*

LEVI, Cl. Dr.ès Sci., Prof. — Lab. de Biol. génér., Fac. des Sci. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France

- a. Descriptive and experimental embryology, morphogenesis, cytology (electron microscopy). *(Porifera)*

LEVI, G. L. Dr., M.I.I.E., Prof.(Emer.) — c/o Ist. di Anat. umana, Fac. di Med., Corso Massimo d'Azeglio 52, TORINO, Italia

LEVI-MONTALCINI, Miss R. M.D., M.I.I.E. — Dept. of Zool., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.

- a. Comparative investigation of neurogenesis. (lower *Vertebrata, Aves, Mammalia)*
- b. Study of action of the nerve growth factor and related problems in experimental neurobiology

LEVIS, A. G. Dr.Biol.Sci. — Ist. di Zool., Anat. comp. e Genet., Fac. di Sci., Via Loredan 10, PADOVA, Italia

- a. Cell metabolism and multiplication in vitro. *Cavia* spec., *Cricetulus griseus (Rodentia)*
- b. Germ cell differentiation in vitro. *(Amphibia)*

LEVY, E. — Finsen Lab., Finsen Inst., Strandboulevarden 49, COPENHAGEN, Denmark

a. Radiation sensitivity of oocytes. *Mus musculus (Rodentia)* (in collaboration with Mrs. H. PETERS)

b. Generation time and turnover time of cells in the vaginal and uterine epithelium. *Mus musculus (Rodentia)* (in collaboration with Mrs. H. PETERS)

c. DNA synthesis in oocytes. *Mus musculus (Rodentia)* (in collaboration with Mrs. H. PETERS and M. CRONE)

LHOTKA, J. F., Jr. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Oklahoma, 800 N.E. 13th St., OKLAHOMA CITY, Okla. 73104, U.S.A.

LI, Mrs. Yu-Ying FU Ph.D. — Med. Chemistry Unit, Communicable Disease Center, U.S. Public Health Service, ATLANTA 22, Ga., U.S.A.

a. Thyroid function in the fetus. *Rattus* spec., *Homo sapiens (Mammalia)*

b. Effects of P^{32} and C^{14} on the embryo. *(Orthoptera)*

LIANG, H. M. B.S., M.S., Ph.D., Prof. — Dept. of Biomorphics, Natl. Defense Med. Center, TAIPEI, Taiwan, Republic of China

a. Aureomycin and growth of thyroidectomized tadpoles. *Rana catesbeiana (Anura)*

b. Microscopic study of thyroidectomized tadpoles treated with aureomycin. *Rana catesbeiana (Anura)*

c. Microscopic study of the aureomycin-treated thyroid gland of tadpoles. *Rana narina (Anura)*

LIBRERA, Miss E. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Electron microscopy of eggs. *(Insecta)*

b. Research on the germinal determinant of the eggs. *Discoglossus pictus (Anura)*

LIEDKE, Mrs. K. BEYER Ph.D. — Dept. of Biol. Sci., Fairleigh Dickinson Univ., TEANECK, N.J., U.S.A.

a. Induction and differentiation studies using tritiated thymidine and cytidine. *(Amphibia)*

b. Biosynthesis in lens and eye development. *Ambystoma punctatum (Urodela)*, *Rana pipiens (Anura)*

LIEM, K. F. Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill. 60612, U.S.A.

a. Sex differentiation, sex reversal and the biological significance of these phenomena. *Monopterus albus (Synbranchidae, Teleostei)*

LIERSE, W. Dr.med. — Anat. Inst. der Univ., Univ.-Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutsche Bundesrepublik

a. Makroskopische, elektronenoptische und histochemische Untersuchungen über die Angioarchitektur des Archipallium, des Neopallium, des Corpus striatum und des Cerebellum. *(Reptilia; Aves; Mammalia)*

LILLELUND, K. Dr. — Inst. für Hydrobiol. und Fischereiwiss., Univ. Hamburg, Olbersweg 24, 2 HAMBURG-Altona 1, Deutsche Bundesrepublik

a. Studies on the tolerance of eggs to light and temperature during the time of incubation. *Esox lucius (Teleostei)*

LIMBORGH, J. van M.D., Prof. — Anat.Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands
a. Sex differentiation. *Anas boschas (Aves)*
b. Morphogenesis of the skull. *Gallus domesticus (Aves)*
c. Development of the harelip condition (descriptive studies). *Homo sapiens (Primates)*

LINDAHL, P. E. Fil.Dr., Prof. — Inst. of Zoophysiol., Univ. of Uppsala, UPPSALA, Sweden

LINDBERG, N. O. H. Fil.Dr., Prof. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

LIOSNER, L. D. Dr.Biol.Sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.
a. Regeneration of organs. *(Amphibia)*
b. Metamorphosis. *(Amphibia)*
c. Regeneration of irradiated organs. *(Vertebrata)*
d. Regeneration of inner organs. *Mus musculus, Rattus norvegicus (Rodentia)*

LIOTTI, F. S. Dott., Prof. — Ist. di Biol. gener., Fac. di Med., Via del Giochetto, PERUGIA, Italia
a. Azione delle gibberelline nello sviluppo embrionale e sulla moltiplicazione cellulare.
b. Rapporti tra rigenerazione e sistema nervoso. *Dugesia lugubris (Turbellaria)*
c. Ricerche sui meccanismi con cui la colchicina promuove le eteromorfosi. *Dugesia lugubris (Turbellaria)*

LISOWSKI, F. P. L. R. C. P., L. R. C. S. I., L.M. — Dept. of Anat., Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England

LISSIA (FRAU), Mrs. A. M. Dr. — Ist. di Biol. e Zool. gener., Univ. di Sassari, SASSARI, Sardegna, Italia
a. Sexual differentiation in hermaphroditic forms. *Dentex* spec., *Boops* spec., *Diplodus* spec. *(Sparidae, Teleostei)*

LIVERSAGE, R. A. B.A., A.M., Ph.D. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada
a. Influence of nerves and endocrines on regeneration. *Triturus viridescens (Urodela)*

LJUNGQVIST, A. G. Dr.Med. — Dept. of Pediatric Pathol., Karolinska Hosp., STOCKHOLM 60, Sweden
a. Anatomy and pathology of the developing kidney. *Homo sapiens (Primates)*

LOCKE, M. M.A., Ph.D., Prof. — Developm. Biol. Center, Dept. of Biol., Western Reserve Univ., 2127 Cornell Road, CLEVELAND 6, Ohio, U.S.A.

LÖFBERG, J. E. Fil.kand. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Morphogenetic movements of the archenteron. *Ambystoma mexicanum (Urodela)*

LOFTS, B. — Dept. of Zool. & Comp. Anat., St. Bartholomew's Med. Coll., Charterhouse Square, LONDON E.C.1, England
a. The regulation of breeding cycles. *(Mammalia)*
b. The mechanics of spermatogenesis. *(Mammalia)*

LOGGER (VAN DER HAGE), Mrs. M. H. Vet.Surg. — Veter. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands

a. Normal and pathological development. *(Mammalia)*

LOPASHOV, G. V. Dr.biol.sci., M.I.I.E., Prof. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Action of homogenate fractions and cell secretions from different organs and their rudiments, and of some complex milieus on the development of embryonic cells (gastrula ectoderm, eye vesicle) in isolated state, monolayers and aggregates of different sizes. *Rana arvalis, R. temporaria, R. ridibunda (Anura), Ambystoma mexicanum (Urodela)*

b. Developmental mechanisms and metaplastic potencies of the embryonic and larval eye. *Misgurnus fossilis (Cobitidae), Leucisceus bergi (Cyprinidae, Teleostei), Rana arvalis, R. temporaria, Bufo viridis (Anura)* (in collaboration with V. I. MITASKOV)

c. Nuclear transplantation between some differentiated cells. *Ambystoma mexicanum (Urodela), Bufo bufo, B. viridis (Anura), Rattus norvegicus (Rodentia)*

LOS, J. A. Med.Dr. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands

LOUVET, J.-P. Dr.Biol.anim. — Lab. de Zool. expér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France

a. Recherches descriptives et expérimentales sur la formation de la bandelette embryonnaire. *Carausius* spec. *(Orthoptera)*

LOVE, D. Ph.D. — Dept. of Anat., Developm. Biol. Center, Western Reserve Univ., 2127 Cornell Road, CLEVELAND, Ohio 44106, U.S.A.

a. Chemistry of developing muscle.

LØVTRUP, S. Dr.Phil., M.I.I.E. — Dept. of Histol., Univ. of Gothenburg, Medicinaregatan 5, GÖTEBORG-SV, Sweden

a. Mechanism of determination of bilateral symmetry and of gastrulation. *(Amphibia)*

b. Permeability and osmotic swelling. *(Amphibia)*

c. The influence of low temperatures on chemical differentiation. *(Amphibia)*

LUCEY, E. C. A. B.Sc. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland

a. Film of normal development. *Gallus domesticus (Aves)*

b. Technique of in vitro culture of embryo; descriptive material covering first 72 hours of development in vitro. *Gallus domesticus (Aves)*

LÜDTKE, H. Dr., Prof. — Zool. Inst. der Univ., Ketzerbach 53, 355 MARBURG/Lahn, Deutsche Bundesrepublik

a. Physiology of development. *Carabus* spec. *(Carabidae, Coleoptera), Notonecta* spec. *(Notonectidae, Hemiptera)*

b. Morphological and functional development of sense organs. *Rhodnius prolixus (Hemiptera), Lebistes reticulatus (Teleostei), Gallus domesticus (Aves)*

LUDWIG, D. A.B., Ph.D., Prof. — Biol. Lab., Fordham Univ., NEW YORK, Bronx, N.Y. 10458, U.S.A.

a. Effects of substrates and inhibitors on oxygen consumption of homogenates during embryonic development. *Tenebrio molitor, Popillia japonica (Coleoptera)*
b. Study of respiratory enzymes during development. *Tenebrio molitor (Coleoptera)*
c. Effects of parental age. *Tenebrio molitor (Coleoptera)*

LUDWIG, K. S. Dr.med., Prof. — Anat. Inst. der Univ., Pestalozzistr. 20, BASEL, Schweiz
a. Studies on the placenta. *Rhinoceros unicornis (Perissodactyla), (Suinae et Bovinae, Artiodactyla)*
b. Histochemistry of segmentation. *Rattus norvegicus, Cricetus auratus (Rodentia)*

LULLINI, Mrs. I. GALLIANI M.D. — Ist. di Anat. Umana Normale, Univ. di Bologna, Via Irnerio 48, BOLOGNA, Italia
a. Action of low temperatures and X-rays on mitotic activity in the embryo. *Gallus gallus (Aves)*

LUTHER, W. Dr.Phil., M.I.I.E., Prof. — Zool. Inst. der Techn. Hochschule, DARMSTADT, Deutsche Bundesrepublik

LUTWAK (MANN), Mrs. C. M.D., Ph.D. — Molteno Inst., A.R.C. Unit of Reproductive Physiol. & Biochem., Univ. of Cambridge, Downing St., CAMBRIDGE, England
a. Physiology and biochemistry of the early embryo. *Rattus rattus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
b. Teratology. *Rattus rattus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

LUTZ, H. Dr.ès Sci., M.I.I.E., Prof. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France
a. Développement du blastoderme pendant les premières heures de l'incubation. *Anas* spec. *(Aves)*
b. La polyembryonie expérimentale; l'orientation des embryons. *(Aves)*
c. Polyembryonie expérimentale. *(Salmonidae, Teleostei)* (en collaboration avec Mrs. Y. LUTZ (OSTERTAG))
d. Formation de l'entoblaste. *(Aves)*
e. Action des ultra-sons sur l'embryon et sur différents organes. *Gallus* spec. *(Aves)* (en collaboration avec Mrs. Y. LUTZ (OSTERTAG))
f. Culture in vitro du blastoderme. *(Aves)* (en collaboration avec Mrs. Y. LUTZ (OSTERTAG))
g. Free-martinisme spontané. *(Aves)* (en collaboration avec Mrs. Y. LUTZ (OSTERTAG))

LUTZ (OSTERTAG), Mrs. Y. Dr.ès Sci. — Lab. de Biol. Anim., 1 Avenue Vercingétorix, CLERMONT-FERRAND, France
a. La genèse de l'asymmétrie du tractus génital et la régression des canaux de Müller par la méthode d'explantations. *Gallus* spec. *(Aves)*
b. Rôle des hormones dans la différenciation primaire du sexe. *Gallus* spec., *Coturnix coturnix (Aves)*
c. Polyembryonie expérimentale. *(Salmonidae, Teleostei)* (en collaboration avec H. LUTZ)
d. Action des ultra-sons sur l'embryon et sur différents organes. *Gallus* spec. *(Aves)* (en collaboration avec H. LUTZ)
e. Culture in vitro du blastoderme. *(Aves)* (en collaboration avec H. LUTZ)

f. Free-martinisme spontané. *(Aves)* (en collaboration avec H. LUTZ)

LYNE, A. G. B.Sc., Ph.D. — Div. of Anim. Physiol., C.S.I.R.O., Ian Clunies Ross Anim. Res. Lab., Great Western Highway, (P.O. Box 144, Parramatta), PROSPECT, N.S.W., Australia

a. Development of skin and hair. *Trichosurus vulpecula, Perameles nasuta (Marsupialia)*
b. Structure and development of hair follicles and associated glands. *Ovis* spec. *(Artiodactyla)*
c. Structure and development of skin and hair. *Chinchilla* spec. *(Rodentia), Ceropithecus mitis (Primates)*

LYNN, W. G. A.B., Ph.D., Prof. — The Catholic Univ. of America, WASHINGTON 17, D.C., U.S.A.

LYSER, Miss K. M. A.B., M.A., Ph.D. — Dept. of Anat., Schools of Med. and Dent., Georgetown Univ., 3900 Reservoir Road, N.W. WASHINGTON D. C. 20007, U.S.A.

a. Differentiation of the central nervous system; electron microscopy. *Gallus domesticus (Aves)*
b. Effects of other tissues on differentiation of neural tube in organotypic culture; light and electron microscopy. *Gallus domesticus (Aves)*

McCAFFERTY, R. E. B.S., M.S., Ph.D., Prof. — Dept. of Anat., Med. Center, West Virginia Univ., MORGANTOWN, W.Va. 26506, U.S.A.

a. Electromotive force generated by the uterus (correlations between uterine contraction and growth stages of embryo and fetus). *Mus musculus (Rodentia)*
b. Histochemical studies of the development of the fetal brain. *Homo sapiens (Primates)*

McCALLION, D. J. B.A., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Toronto, TORONTO 5, Ont., Canada

a. Specific inhibition of differentiation in embryonic organs by extracts of homogenates of homologous adult organs. *Gallus domesticus (Aves)*
b. Development of specific proteins in the central nervous system studied by fluorescence and electrophoresis. *Gallus domesticus (Aves)*
c. Specific chemical relationships in the development and regeneration of the lens. *Gallus domesticus (Aves)*
d. Heterogeneous inductions. *Gallus domesticus (Aves)*

McFARLANE, A. B.A., M.B., B.Chir. — Dept. of Anat., the Univ., NEWCASTLE upon Tyne 1, England

a. Functional development of pharyngeal derivatives. *(Vertebrata)*

McKEEHAN, M. S. A.B., M.S., Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.

a. The location of mitotic cells in the neural tube. *Ambystoma* spec. *(Urodela), Rana pipiens (Anura)*

McKENZIE, J. M.D. — Dept. of Embryol., Marischal Coll., Univ. of Aberdeen, ABERDEEN, Scotland

a. The metabolic characteristics of different tissues in the early embryo. *Gallus gallus (Aves)*
b. The cytological effects of metabolic inhibitors on the early embryo. *Gallus gallus (Aves)*
c. The effects of adult tissue homogenates on the early embryo. *Gallus gallus (Aves)*

MACKIE, R. N. M.D. — Dept. of Anat., Marischal Coll., Univ. of Aberdeen, ABERDEEN, Scotland
- a. The teratogenic action of hydrocortisone on the early embryo explanted by the technique of New and the mitigation of this action by chemical substances. *Gallus gallus (Aves)*

McLAREN, Miss A. M.A., D.Phil. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
- a. Induction of super-fecundity by hormone treatment. *Mus musculus (Rodentia)*
- b. Influence of early embryonic environment upon later development, investigated by in vitro cultivation of early embryos. *Mus musculus (Rodentia)*
- c. Influence of ageing on fecundity, in normal and unilaterally ovariectomized animals. *Mus musculus (Rodentia)*
- d. Immunization against spermatozoa, and its effect on female reproductive performance. *Mus musculus (Rodentia)*
- e. A maternal effect exerted by females homozygous for the recessive gene hairloss. *Mus musculus (Rodentia)*

MACMILLAN, E. W. Dr. — Dept. of Anat., Univ. of Liverpool. LIVERPOOL 3, England
- a. The rate of transport of spermatozoa through the ductus epididymidis. *(Mammalia)*

McMURRAY (VOLLMER), Mrs. V. M. A.B., M.S., Ph. D. — 3336 A West 6th St, FORT WORTH, Tex., U.S.A.

McNUTT, C. W. A.B., M.S., Ph.D., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.
- a. Analysis of morphological effects of the short ear gene. *Mus musculus (Rodentia)*
- b. Embryological study of a new genetic condition causing an "abortive" condition of the tail. *Mus musculus (Rodentia)*

MacRAE, Mrs. E. J. KRUGELIS B.S., M.A., Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.
- a. Porphyrin synthesis, *Dugesia dorotocephala (Turbellaria), Eisenia foetida (Annelida)*
- b. Electron microscopy. *Dugesia tigrina (Turbellaria)*

McWHINNIE, Miss D. J. Ph.D. — Dept. of Biol. Sci., De Paul Univ., 1036 Belden Ave., CHICAGO, Ill. 60614, U.S.A.
- a. Biochemical studies on embryonic bone with particular reference to metabolic pathways, enzyme systems, and hormone effects. *Gallus domesticus (Aves), Rana pipiens (Anura)*

MADJEREK, Z. S. — Anat.Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands
- a. Experimental studies on genito-urinary tract development. *Mus* spec. *(Rodentia)*

MAGGIO, Miss R. Ph.D., M.I.I.E. — Ist. di Anat. comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia
- a. Activation of amino acids during development. *Paracentrotus lividus (Echinoidea)*
- b. Activation of ribosomes at fertilization. *Paracentrotus lividus (Echinoidea)*

MAGIS, N. Lic.en Sci. Zool. — Dépt. Morphol., Inst. de Zool. Ed. Van Beneden, Fac. des Scis., 22 Quai Ed. Van Beneden, LIÈGE, Belgique
  a. Growth and development of amictic females under controlled conditions of breeding and nutrition. *(Rotatoria, Aschelminthes)*

MAHOWALD, A. P., S. J. Ph.D. — Res.Inst. for Nat. Scis., Woodstock College, WOODSTOCK, Md. 21163, U.S.A.
  a. Cytoplasmic synthesis of DNA; ooplasmic DNA. *Drosophila* spec. *(Diptera)*
  b. Ultrastructure of female sterile and embryonic lethal mutants. *Drosophila* spec. *(Diptera)*
  c. Origin and function of polar granules. *Drosophila* spec. *(Diptera)*

MAKHYA, Miss S. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India
  a. Physiology of cell contact. *(Porifera)* (in collaboration with S. MOOKERJEE, B. GANGULY and D. LAHIRI)

MAKINO, S. M.Agr., D.Sc., Prof. — Dept. of Zool., Fac. of Sci., Hokkaido Univ., North 8, West 5, SAPPORO, Japan
  a. Chromosome analysis in tumor tissues, with special reference to the shift of chromosomes and the arisal of new types of tumors. *Rattus norvegicus (Rodentia)*
  b. Chromosome aberrations in patients with congenital disorders, with special regard to the relationship between karyological features and disease states. *Homo sapiens (Primates)*

MAKINODAN, T. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.
  a. Ontogeny of the immune system. *Gallus gallus (Aves), Mus musculus (Rodentia)* (in collaboration with J. ALBRIGHT).

MALAN, Miss M. E. D.Sc. — Zool.Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
  (no embryological work in progress)

MALYUK, V. I. Cand.med.sci. — Dept. of Cytol. and Histogenesis, Inst. of Zool., Acad. of Sci. of the Ukraine, Vladimirskaya St.55, KIEV 30, U.S.S.R.
  a. Principles of genesis, and cytological peculiarities of some derivatives of mesenchyme: histogenesis of blood vessels. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*

MANCINO, G. Dr.Biol.Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
  a. Development and functionality of the gonads in hybrids. *(Urodela)*
  b. Lampbrush chromosomes. *(Urodela)*
  c. Cytology. *(Hirudinea, Annelida), (Opisthobranchia, Gastropoda)*

MANCUSO, V. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
  a. The distribution of enzymes and other substances in the germ during development. *(Evertebrata)*
  b. Ultrastructure of some blastomeres in mosaic eggs. *(Evertebrata)*
  c. Ultrastructural changes during oogenesis. *(Evertebrata)*

MANDL, Miss A. M. B.Sc., Ph.D., D.Sc. — Dept. of Anat., Med. School, Birmingham Univ., Edgbaston, BIRMINGHAM 15, England

MANELLI, H. Dr.Nat.Hist., Dr.Biol.Sci. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italia

a. Growth and differentiation of blood island in vivo and in vitro. *Gallus domesticus (Aves)* (in collaboration with L. MASTROLIA)
b. Growth and differentiation in regeneration. *Planaria* spec. *(Turbellaria)* (in collaboration with P. PASQUINI)
c. On the role of adrenal glands in gonad morphogenesis (in vivo and in vitro). *Gallus domesticus (Aves)*
d. Induced polyspermy. *Paracentrotus lividus (Echinoidea)*

MANFREDI ROMANINI, Mrs. M. G. Ph.D., Prof. — Ist. di Anat. comp., Univ. di Pavia, Piazza Botta 10, PAVIA, Italia

a. Development of gastric glandular cells. *Gallus domesticus (Aves)*
b. Functional differentiation of gastric epithelium (histochemical methods). *Salmo irideus (Teleostei), Salamandra atra, S. maculosa (Urodela), Gallus domesticus (Aves), Mus musculus (Rodentia)*
c. Yolk sac and other membranes. *Gallus domesticus (Aves)*
d. Renewal of the mucous and epithelial cells in the gastric mucosa of adult and developing animals (mitotic counts, histochemical and autoradiographic methods). *Salmo irideus (Teleostei), Rana esculenta (Anura), Mus musculus (Rodentia)*

MANN, S. J. A.B., M.A., Ph.D. — Biol. Station, Roswell Park Memorial Inst., SPRINGVILLE, N.Y., U.S.A.

MANN, T. C.B.E., M.D., Ph.D., Sc.D., F.R.S., M.I.I.E. — Molteno Inst., A.R.C. Unit of Reproductive Physiol. & Biochem, Univ. of Cambridge, Downing St, CAMBRIDGE, England

a. Biochemistry of semen. *(Mammalia)*
b. Biochemistry of the male reproductive organs. *(Mammalia)*
c. Comparative biochemistry of reproduction. *(Mollusca; Elasmobranchii)*, various large domestic, small laboratory and wild animals *(Mammalia)*

MANNER, H. W. B.S., M.S., Ph.D., Prof. — Div. of Science and Mathematics, Utica Coll. of Syracuse Univ., ITHACA, N.Y., U.S.A.

a. Organogenesis of carpals in regenerating forelimbs. *Triturus viridescens (Urodela)*
b. The role of the radius in carpal formation in regenerating forelimbs. *Ambystoma opacum (Urodela)*

MANSUETO, Miss C. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Investigations on development by use of radio-isotopes. *(Ascidiae)*
b. Incorporation of marked amino acids in nucleated and non-nucleated fragments of unfertilized eggs and oocytes. *(Ascidiae)*

MANUILOVA, Mrs. N. A. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

a. The development of the central nervous system in connection with the development of the receptors. *(Aves)*
b. Study of the formative role of the optic receptor under natural conditions and following intensification of visual function by artificial lighting. *(Aves)*

MANUKHIN, B. N. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

MANZOLI, F. A. Dott. — Inst. of Histol. and Gener. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italia

a. Differentiation of muscular tissue.

MARAUD, R. Dr.en Méd., Dr.ès Sci., Prof. — Lab. de Biol., Fac. de Méd., Univ. de Bordeaux, BORDEAUX, France

a. Différenciation sexuelle. *(Vertebrata)*

b. Physiologie de la thyroide embryonnaire. *(Vertebrata)*

MARCEL, R. — Inst. de Zool., Fac. des Sci., 23 Rue Gosselet, LILLE (Nord), France

a. Etude in vivo et in vitro de la morphogenèse au cours du développement et de la régénération. *Sabella pavonina, Sabellaria spinulosa, Nereis diversicolor, Syllis amica, Eisenia foetida (Annelida)*

MARCONNET, R. — Lab. d'Embryol., Fac. de Méd., 31 Rue Lionnois, NANCY (Meurthe & Moselle), France

MARGOLIS, G. A.B., M.D., Prof. — Dept. of Pathol., Dartmouth Med. School, HANOVER, N.H. 03755, U.S.A.

a. Virus-cell interaction, replication and differentiation. *Cricetus auratus, Rattus natalensis, R. norvegicus, Mus musculus (Rodentia), Felis domestica (Carnivora)*

b. Cerebellar hypoplasia induced by postnatal virus infections. *Cricetus auratus, Rattus natalensis, R. norvegicus, Mus musculus (Rodentia), Felis domestica (Carnivora)*

MARIN (LEWIN), Mrs. L. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Etude du comportement du foie embryonnaire cultivé in vitro. *Gallus gallus (Aves)*

b. Etude de l'étalement d'organes embryonnaires cultivés in vitro sur différents supports solides. *Gallus gallus (Aves)*

MARINI, Miss M. Dr.Biol.Sci. — Ist. di Anat. Comp., Fac. di Sci. Fis.Mat. e Nat., Univ. di Modena, Via Berengario 14, MODENA, Italia

a. Growth and differentiation of the subcommissural organ. *(Amphibia)*

b. Growth and differentiation of the neurosecretory system. *(Amphibia)*

c. Mitotic ratio in the regeneration of the nerve cord. *(Amphibia)*

MARINKOVIC, D. B.Sc. — Inst. of Nuclear Sci. "Boris Kidrich", BELGRADE, Yugoslavia

a. Teratological changes in embryos produced by nucleic acids in early embryogenesis; effects on progeny of these animals. *Gallus domesticus (Aves)*

MARKERT, C. L. Ph.D., Prof. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a. Chromosomal differentiation. *Rana pipiens (Anura), Mus musculus (Rodentia)*

b. Ontogeny of isozymic patterns of enzymes. *Mus musculus (Rodentia)*

c. Changes in synthetic ability during cellular differentiation. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

d. Biochemistry of development. *Ascidia nigra (Ascidiae)*

MARKMAN, B. Fil.lic. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. Studies of labelled precursors incorporated into eggs and embryos in different stages of development, and the correlation of the results to morphogenetic events. *(Echinoidea)*

MARÓN, K. M. M.Sc. — Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKÓW, Poland

MAROTTI, G. Dr. — Inst. of human Anat., Fac. of Med., Policlinico, BARI, Italy

a. Histological and histochemical changes in the developing cornea of diminutive eye bulbs. *Gallus domesticus (Aves)*

MARSLAND, D. A. B.Sc., M.S., Ph.D., Prof. — Marine Biol. Lab., Box 665, WOODS HOLE, Mass. 02543, U.S.A.

a. Cell division. *(Echinoidea)*
b. Meiotic division; polar body formation; partial reversal of the anti-meiotic effects of heavy water (D_2O) by application of high hydrostatic pressure. *Asterias forbesi (Asteroidea, Echinodermata)*

MARTIN, R. Dr. — Zool. Station, NAPOLI, Italia

MARTÍNEK, J. MUDr. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia

a. Cytochemistry and electron microscopy of eggs. *(Mammalia)*

MARTINET, Mrs. M. Dr.ès Sci. — Lab. d'Histol., Fac. de Méd. de Paris, 45 Rue des Sts. Pères, PARIS VIe, France

a. Influence tératogène des intoxications. *Mus rattus (Rodentia)*
b. Influence tératogène de l'hypervitaminose A. *Mus rattus, M. musculus, Cavia cobaya (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
c. Influence tératogène des rayons X. *Mus musculus (Rodentia)*

MARTINOVIC, J. V. B.Sc. — Inst. of Nuclear Sci. "Boris Kidrich", BELGRADE, Yugoslavia

a. Teratological changes in embryos produced with Tyrode plus DNA; effect on progeny of these animals. *Gallus domesticus (Aves)*
b. Transplantation of the forebrain region in early embryogenesis; immunological reactions. *Gallus domesticus (Aves)*

MARTINOVITCH, P. N. M.A., Ph.D., M.I.I.E. — Dept. of Exper. Histol. and Organ Culture, Inst. of Nuclear Sci. "Boris Kidrich", P.O.Box 522, BELGRADE, Yugoslavia

a. Teratological changes in embryos produced with Tyrode plus DNA; effect on progeny of these animals. *Gallus domesticus (Aves)*
b. Transplantation of the forebrain region in early embryogenesis; immunological reactions. *Gallus domesticus (Aves)*

MARTY, R. J. L. Dr.en Méd., Dr.ès Sci. — Centre de Recherches de Neuromorphol. fonctionnelle, Fac. des Scis., Univ. de Montpellier, Chemin des Brusses, MONTPELLIER 34 (Hérault), France

a. Neurophysiologie post-natale. 1. Stimulation auditive par "tone burst". 2. Stimulation électrique du nerf vestibulaire. *Felis catus, Oryctolagus cuniculus (Mammalia)*
b. Neuronanatomie de l'ontogénèse. 1. Maturation post-natale de la cochlée; corrélations neurophysiologiques. 2. Epaisseur de l'écorce cérébrale au cours du développement; corrélations neurophysiologiques. 3. Myélinisation du nerf optique (étude au microscope électronique). *Felis catus, Oryctolagus cuniculus (Mammalia)*

MARUYAMA, K. D.Sc. — Biol. Inst., Coll. of Gen. Education, Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

- a. Myogenesis in the embryo. *Gallus domesticus (Aves)*

MASHUGA, P. M. Dr.Biol.Sci. — Dept. of Cytol. and Histogenesis, Inst. of Zool., Acad. of Sci. of the Ukraine, Vladimirskaya St.55, KIEV 30. U.S.S.R.

- a. Principles of genesis, and cytological peculiarities of some derivatives of mesenchyme: the peculiarities of endochondral and perichondral osteogenesis. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*
- b. Onto- and phylogenesis of the blood-vascular trunks of the extremities. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*
- c. The development of the blood-vascular bed of the joint capsule. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*
- d. Histogenesis of blood vessels; comparative hemopoiesis. Domestic and laboratory animals *(Mammalia), Homo sapiens (Primates)*

MASLOW, D. E. B.S. — Dept. of Biol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

- a. Myogenesis. *(Vertebrata)*

MASSART, C. M.D., Prof. — Inst. of Anat. and Histoembryol., Univ. of Pisa, Via Roma 33, PISA, Italia

MASSON (ROZIER), Mrs. Cl. Lic.ès Sci. — Lab. de Zool. Génér., Fac. des Scis. de Nancy, 30 Rue Ste Cathérine, NANCY, France

- a. Régénération. *Dendrocoelum lacteum (Turbellaria)*

MASTROLIA, Miss L. Dr.Biol.Sci., — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italia

- a. Tissue culture of embryonic adrenal gland. *Gallus domesticus (Aves)*
- b. Growth and differentiation of blood island in vivo and in vitro. *Gallus domesticus (Aves)* (in collaboration with H.MANELLI)

MASUI, Y. D.Sc. — Dept. of Biol., Fac. of Sci., Kônan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan

- a. Studies of the induction problem in early development. *(Amphibia)*
- b. Analysis of proteins of subcellular components of embryonic cells. *(Amphibia)*

MATĚJKA, M. MUDr., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia

- a. The morphogenesis of the genital organs from the standpoint of evolutionary morphology. *(Amniota,* incl. *Homo sapiens)*
- b. The morphogenesis of the genital organs studied on the basis of experimental embryology. *(Amniota)*

MATHUR, R. S. B.Sc., M.Sc., Ph.D. — Dept. of Zool., Univ. of Rajasthan, JAIPUR, India

- a. Studies on spermatogenesis (morphology, cytochemistry, physiology and genetics). *Meriones hurrianae (Zapodidae, Rodentia), Funambulus pennanti (Sciuridae, Rodentia), Rattus rattus rufescens (Muridae, Rodentia), Rhinopoma kinneari (Microchiroptera, Insectivora), Suncus murinus sindensis, (Soricidae, Insectivora)*
- b. Effects of hormones on developing accessory reproductive organs. *(Insectivora, Rodentia)*

MATSUMOTO, J. B.S., D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hoyoshi, Japan

a. Correlation between pigment formation and fluorescent substances during postembryonal stages. *Carassius auratus (Teleostei)*
b. Biochemical and morphological properties of the pigment granules of chromatophores in relation to function and differentiation. *Xiphophorus helleri, Carassius auratus (Teleostei)*

MATTON (VAN LEUVEN), Mrs. M.D. — Opthalmol. Clinic, Univ., Hosp., De Pintelaan, GENT, Belgium
a. Cytogenetic evaluation of congenital and hereditary diseases and anomalies. 1. Sex chromatine determination of buccal mucosa cells and polymorphonuclear neutrophil leucocytes. 2. Visualisation of chromosomes in fibroblast cultures. *Homo sapiens (Primates)*

MATUSZEWSKI, B. Ph.D. — Dept. of Cytol., Warsaw Univ., Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland

MAWATARI, Sh. D.Sc. — Research Inst. for Natural Resources, Hyakunin-cho, 400 Shinjuku, TOKYO, Japan

MAY, R. M. Ph.D., Dr.ès Sci., Dr.en Méd., Prof. — Lab. d'Anat. Comp., Fac. des Scis. de Paris, Centre d'Orsay, ORSAY (S. & O.), France
a. Brephoplastic transplantation. *Mus musculus (Rodentia)*
b. Tissue culture and embryonic transplantation.

MAYER, T. C. B.A., M.A., Ph.D., Prof. — Dept. of Biol., Rider Coll., TRENTON 8, N.J., U.S.A.
a. Embryogenesis of pigmentary patterns. *Mus musculus (Rodentia)*

MECKLENBURG, C. L. F. C. von Fil.lic. — Zootom. dept., Zool., Inst., Univ. of Lund, LUND, Sweden
a. Saccus vasculosus, morphogenesis and histogenesis. *Salmo salar, Sirideus* spec. *(Teleostei)*

MEDAWAR, P. B. M.A., D.Sc., F.R.S. — National Inst. for Med. Research, Mill Hill, LONDON N.W. 7, England.

MELANDER, Y. — Inst. of Genet., Univ. of Lund, LUND, Sweden
a. Ooplasmic segregation, mitosis and germ line differentiation in early embryos. *Tomopteris helgolandica (Polychaeta)*

MELEHOVA, O. P. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
a. A study of free radicals in the skin after irradiation. *Rana temporaria (Anura)*
b. A study of the physico-chemical processes in cornea induction. *Rana temporaria (Anura)*

MELLINGER, J. Dr.ès Sci. — Lab. de Zool. et d'Embryol. expér., Fac. des Scis., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France
a. Génèse, différenciation et rôle des sacs vasculairs, étude expérimentale. *(Pisces)*
b. Génèse, différenciation et rôle de la vascularisation hypophysaire. *(Selachii)*

MENDONÇA, H. Prof. — Cadeira de Histol. e Embriol., Fac. de Med., Univ. do Recife, Caixa Postal N.616, RECIFE, Brasil
(no embryological work in progress)

MENKES, B. Dr.med., Prof. — Acad. Republ. Populare Romîne, Baza de cercetări stiințifice Timișoara, Bul. Mihai Viteazul 24, TIMIȘOARA, Rumania

- a. Rolle der physiologischen und induzierten Nekrosen in der Teratogenese.
- b. Ausarbeitung von Testmethoden in der Teratogenese.
- c. Studien an embryonalen heterostadialen Transplantaten. *Gallus domesticus (Aves)*
- d. Kinematographische Untersuchungen von Wachstums- und Entwicklungsvorgängen in den embryonalen Axialorganen. *Gallus domesticus (Aves)*
- e. Transplantation von embryonalen Organen in den Hühner-Embryo. *Homo sapiens (Primates)*
- f. Wirkung exogener Faktoren auf die embryonale Entwicklung; pränatale Pathologie. *Gallus domesticus (Aves)*

MENSCHIK, Z. M.D., D.Sc., L.M.C.C., Prof. — Dept. of Anat., Schools of Med. and Dent., Georgetown Univ., 3900 Reservoir Road, N.W., WASHINGTON, D.C. 20007, U.S.A.
- a. Dietary factors in development. *Mus musculus (Rodentia)*
- b. Deficiency of vitamin E and essential unsaturated fatty acids in the development of the central nervous system. *Mus musculus (Rodentia)*

MERCIER (PAROT), Mrs. L. Dr.ès Sci. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
- a. Tératogenèse par sulfamides hypoglycémiants, antimetabolites. *Rattus* spec. *(Rodentia)* (en collaboration avec H. TUCHMANN-DUPLESSIS)
- b. Influence de la cortisone sur la gestation et le développement foetal. *Rattus* spec. *(Rodentia)*
- c. Influence des alcaloïdes du Rauwolfia, de la réserpine et de la déserpidine, sur le développement. *Rattus* spec. *(Rodentia)* (en collaboration avec H. TUCHMANN-DUPLESSIS)
- d. Influence des neuroleptiques sur les malformations congénitales. *Rattus* spec., *Mus* spec., *Oryctolagus cuniculus (Mammalia)*
- e. Diabète expérimental et grossesse. *(Mammalia)*

MERKLE, U. Dr.med., Priv.Doz. — Anat. Inst. der Univ., 852 ERLANGEN, Deutsche Bundesrepublik
- a. Spermatogenese und Sertoli-Zellen. *Rattus* spec. *(Rodentia)*

METAFORA, S. Dr. Med. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
- a. Study of fertilizins. *(Ascidiae)*
- b. Enzymes in the egg. *(Ascidiae)*

METZ, C. B. A.B., Ph.D., M.I.I.E. — Inst. of Molecular Evolution, Univ. of Miami, 521 Anastasia St., CORAL GABLES 46, Fla., U.S.A.

MEURLING, P. B. Fil.lic. — Zootom. Dept., Zool. Inst., Univ. of Lund, LUND, Sweden
- a. Hypophysis, morphogenesis and histogenesis. *Squalus acanthias, Etmopterus spinax (Elasmobranchii)*

MEUSY, J. J. Dipl.d'Etudes Sup. — Lab. de Génét. évolutive du C.N.R.S., GIF-sur-Yvette (S.et O.), France
- a. Corrélations endocrines. *(Decapoda, Crustacea)*
- b. Ultrastructure de la glande androgène. *(Crustacea)*

MEYER, D. B. Ph.D. — Dept. of Anat., School of Med., Wayne State Univ., 1400 Chrysler Xway, DETROIT, Mich. 48207, U.S.A.

a. Morphogenesis and developmental histochemistry of embryonic eye. *Gallus domesticus (Aves)*
b. Histochemical studies of gonadal development. *Gallus domesticus (Aves)*
c. Prenatal ossification of the skeleton. *Homo sapiens (Primates)*

MEYER, G. F. Dr.rer.nat. — Max Planck Inst. für Biol., Spemannstr. 34, TÜBINGEN, Württemberg, Deutsche Bundesrepublik
a. Development and differentiation of male germ cells. *Drosophila hydei (Diptera)*

MEYER, Mrs. I. Dr. — Dept. of Dermatol., Rigshosp., Blegdamsvej, COPENHAGEN Ø, Denmark

MEYER, P. Dr. — Med.-anat. Inst., University, COPENHAGEN Ø, Denmark

MEZGER-FREED, Mrs. L. A.B., M.A., Ph.D. — Dept. of Biol., Bryn Mawr Coll., BRYN MAWR, Pa., U.S.A.
a. Studies on nucleic acids in embryos. *Rana pipiens (Anura)*

MICCIARELLI, Miss A. Dr.Biol.Sci. — Ist. di Istol. ed Embriol., Fac. di Sci., Univ. di Perugia, PERUGIA, Italia
a. Differentiation of blastoderm in vitro. *Gallus gallus (Aves)*

MICHAEL, M. I. B.Sc., Ph.D. — Dept. of Zool., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt
a. The development of the olfactory organs. *Bufo regularis (Anura)*
b. Experimental analysis of the development of the sensory placodes. *Ambystoma mexicanum (Urodela)*
c. Experimental analysis of the development of the cephalic ganglia and other derivatives of the head neural crest. *Ambystoma mexicanum (Urodela)*
d. The development of the urogenital system. *Bufo regularis (Anura)* (in collaboration with S. N. SEDRA and S. KHALIL)
e. Studies on hind limb regeneration. *Bufo regularis (Anura)* (in collaboration with N. M. EL MALKH)

MICHALOWSKI, I. Ph.D. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Sex determination and its abnormalities. *Xenopus laevis (Anura)*
b. Hermaphroditism. *(Amphibia)*
c. The karyology of the red cells during development. *(Anamnia)*

MICHELUCCI, S. — Inst. of Anat. and Histoembryol., Univ. of Pisa, Via Roma 33, PISA, Italia

MICHON, J. Dr.ès Sci. — Lab. de Zool. et Biol. Anim., Fac. des Sci., POITIERS, Vienne, France

MIETE, M. Radiologist, Med.Dr. — Anat.-Embryol. Lab., Fac. of Med., State Univ. of Leiden, Wassenaarseweg, Boerhaavekwartier, LEIDEN, Netherlands (private address: Bachlaan 6, ARNHEM, Netherlands)

MIGLIORINI (BRUSCHELLI), Mrs. G. Dott.Sci.Biol. — Ist. di Biol. gener., Fac. di Med., Via del Giochetto, PERUGIA, Italia
a. Rigenerazione durante lo sviluppo embrionale. *Dugesia lugubris (Turbellaria)*
b. Ricerche sulla eteromorfosi da colchicina. *Dugesia lugubris (Turbellaria)*

MIKAMI, Y. Ph.D., M.D., M.I.I.E., Prof. — Dept. of Anat., Mie Pref. Univ. School of Med., TSU, Japan

a. Etiology of some congenital anomalies. *Mus molossinus albinus (Rodentia)*
b. Developmental mechanism of entodermal organs.
c. Experimental analysis of Wolffian lens regeneration.

MIKAMO, K. Ph.D. — Lab. d'Hormonol. et d'Embryol., Maternité, 1211 GENÈVE, Suisse
a. Sex ratio in fetuses from induced and from spontaneous abortions. *Homo sapiens (Primates)*
b. Chromosomes of various fetal stages, normal and pathologic. *Homo sapiens (Primates)*
c. Chromosomes and genes in sex-reversed animals. *Xenopus* spec. *(Anura)*

MILAIRE, J. M.D., M.I.I.E. — Lab. d'Anat. et d'Embryol., Fac. de Méd. .de l'Université, 97 Rue aux Laines, BRUXELLES, Belgique

MILKMAN, R. D. A.B., A.M., Ph.D., Prof. — Dept. of Zool., Syracuse Univ., 111 Lyman Hall, SYRACUSE, N.Y. 13210, U.S.A.
a. Developmental biology, classical and physiological genetics. *Botryllus schlosseri (Stolidobranchia, Tunicata)*
b. Developmental biology, genetics. *Drosophila melanogaster* and other spp. *(Diptera)*

MILIN, R. Dr., Prof. — Inst. d'Histol. et d'Embryol., Fac. de Méd., Hajduk Velikova ul.br.12, NOVI SAD, Yugoslavia

MILLEN, J. W. M.A., M.D., D.Sc., Sc.D. — Anat. School. Univ. of Cambridge, CAMBRIDGE, England
a. Teratology. *(Mammalia)*

MILLER (STONE), Mrs. F. B.A., Ph.D. — Dept. of Anat., Tulane Univ., NEW ORLEANS 18, La., U.S.A.

MILLER, J. A., Jr. A.B., Ph.D., Sc.D., F.R.M.S. — Dept. of Anat., Tulane Univ., NEW ORLEANS 18, La., U.S.A.

MILLER, O. L., Jr. B.S., M.S., Ph.D. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.
a. The relationship of fine structure to RNA, DNA, and protein metabolism in the lampbrush chromosomes, nucleoli, and nucleoplasm of oocytes (standard sectioning techniques, micromanipulation, enzymatic digestions, phase contrast microscopy, electron microscopy, autoradiography *(Amphibia)*

MILLER, T. J. A.B., M.S., — Saint Barnabas Med. Center, 92 Old Short Hills Road, LIVINGSTON, N.J., U.S.A.
a. The mechanism of cortisone-induced cleft palate, and possible reduction of incidence with vitamin therapy. *Mus musculus (Rodentia)*
b. The biochemistry and morphological changes in the metamorphosing tadpole. *(Anura)*

MILLONIG, G. M.D. — Ist. di Anat. comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia
a. Electron microscopic studies on early development. *Paracentrotus lividus, Arbacia lixula (Echinoidea)*

MILLS, K. S. B.S., M.S., Ph.D., Prof. — Dept. of Zool., Univ. of Oklahoma, NORMAN, Okla., U.S.A.
a. Accelerated growth and orientation of tissue culture cells.

MILMAN, L. S. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Regulation of glycolysis and respiration in embryos. *Misgurnus fossilis (Cobitidae, Teleostei)*

MINA, E. Y. M.B., Ch.B., D.A.M.D. — Dept. of Anat., Fac. of Med., ALEXANDRIA, Egypt

MINAFRA, S. Dr. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, PALERMO, Italia

a. Phosphatase activities in eggs and embryos (quantitative determinations, electrophoretical separations). *(Ascidiae)*

MINELLI, G. Dr.Nat.Sci., Prof. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia

a. The thymus during metamorphosis. *(Amphibia)*

MINGANTI, A. Dr., M.I.I.E., Prof. — Ist. di Istol. ed Embriol., Univ. di Palermo, Via Archirafi 18, PALERMO, Italia

a. Development and cytology of hybrids. *(Ascidiae)*

b. Chemical and physiological investigations on the egg spawn jelly. *(Amphibia)*

MINTZ, Miss B. A.B., M.S., Ph.D., M.I.I.E. — Inst. for Cancer Research, 7701 Burholme Ave., PHILADELPHIA, Pa. 19111, U.S.A.

a. Differentiation and gene action in genetically mosaic animals. *Mus musculus (Rodentia)*

MITASKOV, V. I. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Developmental mechanisms and metaplastic potencies of the embryonic and larval eye. *Misgurnus fossilis (Cobitidae), Leucisceus bergi (Cyprinidae, Teleostei), Rana arvalis, R. temporaria, Bufo viridis (Anura)* (in collaboration with G. V. LOPASHOV)

MITCHISON, J. M. M.A., Ph.D., Prof. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Growth of single cells. *Schizosaccharomyces pombe (Saccharomycetes)*

b. Synthetic patterns during the cell cycle.

MITOLO, V. M.D. — Inst. of human Anat., Fac. of Med., Policlinico, BARI, Italy

a. Developmental alterations following imposition of various laminar materials on the early embryo. *Gallus domesticus (Aves)*

b. Quantitative changes of spinal ganglia and spinal cord after increase of the peripheral field of innervation. *Gallus domesticus (Aves)*

MITRA, B. N. D.Phil. — Cell Research Unit, Dept. of Zool., Univ. of Calcutta, 35, Ballygunje Circular Road, CALCUTTA 19, India

Development of the vertebral column. *(Pisces; Reptilia)*

MITRA, J. M.Sc. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India

a. Induced changes. *(Hydroidea)* (in collaboration with S. MOOKERJEE, A. CHAKRAVARTY and S. BHATTACHERJEE)

MITRA, Miss T. M.Sc. — Dept. of Zool., Presidency Coll., Calcutta 12, West Bengal, India

a. Induced changes. *(Hydroidea)* (in collaboration with S. MOOKERJEE, J. MITRA,, A. CHAKRAVARTY and S. BHATTACHERJEE)

MIYA, K. D.Sc. — Inst. of Applied Entomol., Fac. of Agric., Iwate Univ., MORIOKA, Japan

a. Electron microscopy study of embryonic development. *Bombyx mori (Lepidoptera)*
b. Experimental embryology. *Bombyx mori (Lepidoptera)*
c. Descriptive and experimental embryology. *Atrachya ménétrièsi (Chrysomelidae, Coleoptera)*

MIYAMORI (YAMAMOTO), Mrs. H. Ph.D. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
a. Hormonal effect on gonadal development. *Lebistes reticulatus (Teleostei)*
b. Study on gonadal differentiation. *Coturnix coturnix japonica (Aves)*

MOCHIDA, O. B.Agr. — Kyûshû Natl. Agric. Exper. Station, Fukuoka-ken, Izumi, Nishi 496, CHIKUGO, Japan
a. Morphological and physiological studies on oogenesis. *Nilaparvata lugens (Delphacidae, Homoptera)*

MODAK, S. M.Sc. — Lab. d'Embryol. expér., Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue de l'Ecole de Médecine, GENÈVE, Suisse
a. The problem of the origin of the endoblast and its role in the early stages of development. *Gallus domesticus (Aves)*
b. Ultrastructural study of the hypoblast. *Gallus domesticus (Aves)*

MOE, H. M.D., Prof. — Dept. of Anat., Univ. of Copenhagen, 63 Nörre Alle., COPENHAGEN Ø, Denmark
a. Ultrastructural differentiation of ameloblasts and odontoblasts. *Rattus* spec. *(Rodentia)*
b. Ultrastructural differentiation of intestinal epithelium. *Rattus* spec. *(Rodentia)*

MOFFAT, D. B. M.D. — Dept. of Anat., Univ. Coll. of South Wales and Monmouthshire, CARDIFF, Wales
a. Development of intra-cranial arteries.
b. Development of intra-renal blood vessels.

MOHRI, H. B.Sc., D.Sc. — Biol. Inst., Coll. of Gen. Education, Univ. of Tokyo, Komaba, Meguro-Ku, TOKYO, Japan
a. Physiology and biochemistry of spermatozoa (their motility and respiration). *(Echinoidea, Teleostei, Mammalia)*
b. Lipid metabolism during development. *(Echinoidea)*

MOHSEN, Th. Dr.ès Sci. — Lab. de Biol. anim., Fac. des Sci., Univ. de Dakar, DAKAR, Senegal

MOLD, Miss K. M.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u.58, BUDAPEST IX, Hungary
a. Teratogenesis. *Gallus domesticus (Aves)*

MOLINARO, M. Dr.Med. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Nucleic acids. Different spp. *(Ascidiae)*
b. Activated amino acids in embryos. *(Ascidiae)*
c. RNA during oogenesis and development. *(Ascidiae)*

MOMENT, G. B. A.B., Ph.D., Prof. — Goucher Coll., BALTIMORE, Md. 21204, U.S.A.
a. Experimental and physiological embryology; regeneration. *Eisenia foetida (Oligochaeta), Triturus viridescens (Urodela)*

MONESI, V. M.D. — Lab. di Radiobiol. anim., C.S.N. della Casaccia, ROMA, Italia
a. Spermatogenesis and cell differentiation. *Mus musculus (Rodentia)*

b. Role of histones in cell differentiation and cell function (autoradiography and biochemistry). *Mus musculus (Rodentia)*

MONIE, I. W. M.B., Ch.B., Prof. — Dept. of Anat., Univ. of California School of Med., SAN FRANCISCO 22, Calif., U.S.A.

a. Morphological, histochemical, and organ culture studies on congenital malformations of the cardiovascular, urogenital, and nervous systems induced by teratogenic agents. *Rattus rattus (Rodentia)*

MONNÉ, L. Phil.Dr. — Dept. of Parasitol., Statens Veterinärmedic. Anstalt, STOCKHOLM 50, Sweden

MONROY, A. M.D., M.I.I.E., Prof. — Ist. di Anat. comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia

a. Protein synthesis during development. *(Echinoidea)*

MONTAUFIER, Miss M. C. Dipl. d'Etudes Sup. — Lab. de Génét. évolutive du C.N.R.S., GIF-sur-Yvette (S. et O.), France

a. Glande androgène et évolution cyclique de l'hermaphrodisme non fonctionnel de la gonade du mâle. *Talitrus saltator (Amphipoda, Crustacea)*

MONTEIRO, W. M.S. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil.

a. Morphological and cytophotometrical studies of knobs during development of the embryo. *Zea mays (Graminales)*

MONTERO, C. M.D. — Departamento de Anat., Catedra de Anat. II, Fac. de Med., CADIZ, Spain
private address. C. Obispo Jose Mª Rances 5-2°, CADIZ, Spain

a. Polysaccharide histochemistry in the developing embryo. *Gallus gallus (Aves)*

MONTERO, E. Med.Dr. — Inst. F.Olóriz, Fac. of Med., Univ. of Granada, GRANADA, Spain

a. Developmental pathology (macro- and microscopical). *Gallus domesticus (Aves), Homo sapiens (Primates)*

MONTGOMERY, S. A. B.Sc., M.B., B.S. — Dept. of Zool. and Comp. Anat., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Cytoplasmic grafting, eggs and cleavage stages. *Xenopus laevis, Triturus* spec. *(Amphibia)*

MOODIE, E. W. B.Sc., Ph.D., D.V.M. and S., M.R.C.V.S. — Dept. of Physiol., Univ. of New England, ARMIDALE, N.S.W., Australia

a. Embryonic loss and foetal nutrition. *(Artiodactyla)*
b. Survey of early embryonic mortality. *Ovis aries (Artiodactyla)*
c. Studies on foetal nutrition by arterio-venous techniques. *(Artiodactyla)*

MOOG, Miss F. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.

a. Development of enzyme systems in the embryo. *Gallus domesticus (Aves), (Mammalia)*
b. Role of the pituitary-adrenal axis in fetal and juvenile development. *(Aves; Mammalia)*
c. Chromatographic, electrophoretic, and immunochemical studies of the nature of the alkaline phosphatases of the small intestine, fetal to mature stages. *Mus musculus (Rodentia)*

MOOKERJEE, Mrs. A. M.Sc., Ph.D. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India

a. Active principles in morphogenesis. (in collaboration with S. MOOKERJEE and A. CHAKRAVARTY)

MOOKERJEE, S. M.Sc., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India

a. Induced changes. *(Amoebina, Porifera, Hydroidea)* (in collaboration with S. CHATTERJEE, J. MITRA, A.CHAKRAVARTY, S. BHATTACHERJEE, D. LAHIRI, Miss T. MITRA and S. KANJI)

b. Physiology of cell contact. *(Porifera)* (in collaboration with B. GANGULY, D. LAHIRI and Miss S. MAKHIJA)

c. Differentiation in relation to regeneration. *(Porifera, Coelenterata)* (in collaboration with B. GANGULY and A. SINHA)

d. Active principles in morphogenesis. (in collaboration with Mrs. A. MOOKERJEE and A. CHAKRAVARTY)

MOOR, R. M. B.Sc. — Animal Research Station, A.R.C. Unit of Reproductive Physiol. and Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England

a. The physiological relationship between the early stages of embryonic development, the uterus and the corpus luteum. *Ovis aries, Bos taurus, Sus scrofa (Artiodactyla)*

MOORE, Mrs. B. CLARK A.B., A.M., Ph.D. — Dept. of Zool., Columbia Univ., 954 Schermerhorn Hall, NEW YORK, N.Y. 10027, U.S.A.

a. Incorporation of H^3-cytidine and H^3-uridine into DNA and RNA of normal and hybrid embryos. *Rana pipiens, R. sylvatica (Anura)*

MOORE, J. A. A.B., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Columbia Univ., 954 Schermerhorn Hall, NEW YORK, N.Y. 10027, U.S.A.

a Transplantation of nuclei *(Anura)*

b. Development of diploid and haploid racial hybrids. *Rana pipiens (Anura)*

MORAÏTOU (APOSTOLOPOULOU), Mrs. M. Dipl.sc.nat. — Zool. Lab. and Museum, Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece

a. Influence of the nerve cord on head and tail regeneration. *Allolobophora caliginosa (Lumbricidae, Oligochaeta)*

MORGAN, Miss J. A. B.Sc., M.Sc. — Dept. of Zool., Univ. of New England, ARMIDALE 5 N., N.S.W., Australia

a. Regeneration and metamorphosis of cerci. *Blattella germanica (Dictyoptera, Insecta)* (in collaboration with A. STOCK and A. F. O'FARRELL)

b. Experimental morphological study of dermal osteogenesis. *Gallus domesticus (Aves)*

MORI, H. M.A., D.Agr., Prof. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan

a. Insecticide action on eggs, larvae and adults. *(Insecta)*

MORI, M. Prof. — Dept. of Anat., Fac. of Med., Kyushu Univ., FUKUOKA, Japan

MORI, Y. M.A., Prof. — Dept. of Biol., Keio Univ., YOKOHAMA- Hiyoshi, Japan

a. On the cause of disappearance of cutaneous melanophores of young animals. *Carassius auratus (Teleostei)*

b. Morphological and chemical studies of pigment formation in various species. *(Pisces)*

MORRILL, J. B. A.B., M.S., Ph.D. — Dept. of Biol., Coll. of William and Mary, WILLIAMSBURG, Va., U.S.A.

MORRIS, B. B.Sc., Ph.D. — Dept. of Zool, Univ. of Nottingham, NOTTINGHAM, England

MORRIS, I. G. B.Sc., Ph.D. — A.R.C. Unit of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales

a. Immunological relations of mother and young. *(Mammalia)*
b. Transmission of immunity. *(Mammalia)*

MOSCONA, A. A. M.Sc., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Chicago, CHICAGO 37, Ill., U.S.A.

a. Studies on histogenetic interaction of cells in the development of experimentally constructed cellular systems: aggregation of embryonic cells and of sponge cells.
b. Molecular requirements of cells in vitro for histotypic differentiation.
c. Analysis of developmental metaplasias in embryonic tissues.
d. Experimental studies on the synthesis of selected enzymes and proteins in embryonic tissues and cells in vivo and in vitro. *(Porifera), Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*
e. Studies on interactions of normal and neoplastic cells in vitro.

MOSER, Mrs. G. C. Ph.D., — Dept. of Genetics, Albert Einstein Coll. of Med., Eastchester Road and Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.

a. Developmental physiology. *Mus musculus (Rodentia)*
b. Developmental genetics. *Mus musculus (Rodentia)*
c. Developmental pathology. *Mus musculus (Rodentia)*

MOSSMAN, H. W. B.S., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON 6, Wis., U.S.A.

a. Comparative morphology of the fetal membranes and reproductive tracts. *(Mammalia)*
b. Implantation. *Aepyceros melampus (Bovidae, Artiodactyla)*
c. Uterine influences on the ovary. *(Mammalia)*

MOTOMURA, I. Dr.Sc., M.I.I.E., Prof. — Lab. of Embryol., Inst. of Biol., Tohoku Univ., SENDAI, Japan

MOVTCHAN, Mrs. N. A. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.

a. Immunity of the embryo. *Salmo salar (Teleostei), Testudo horsfieldi (Chelonia)*

MOYER, F. H. Ph.D. — Dept. of Zool., Washington Univ., ST. LOUIS, Mo. 63130, U.S.A.

a. Developmental genetics of melanocyte differentiation studied by electron microscopy and cell fractionation. *Mus musculus (Rodentia)*
b. Comparison of early cleavage in regulative and mosaic embryos studied by electron microscopy and cell fractionation. *Lytechinus variegatus (Echinoidea), Ascidia nigra (Tunicata)*
c. Differential gene action in hybrid embryos studied by analysis of the synthesis of specific proteins. *Rana* spp. *(Anura)*

MOYSE, J. B.Sc. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

MUCHMORE, W. B. Ph.D., Prof. — Dept. of Biol., Coll. of Arts and Sci., Univ. of Rochester, ROCHESTER, N.Y. 14627, U.S.A.
  a. Development of contractile proteins. *(Amphibia)*
  b. Development and growth of myotomes. *Ambystoma* spec. *(Urodela)*

MUGNAINI, E. Cand.Med. (M.D.) — Anat. Inst., Univ. of Bergen, BERGEN, Aarstadvollen, Norway
  a. Ultrastructural studies on the immature cerebellum. *Gallus domesticus (Aves), Mus norvegicus (Rodentia)*

MUIR, A. R. M.B., Ch.B., M.D. — Dept. of Anat., Univ. of Edinburgh, Univ. New Buildings, Teviot Row, EDINBURGH 8, Scotland
  a. Development of myocardium with special reference to the conducting tissue. *Rattus domesticus (Rodentia)*

MULHERKAR, Mrs. L. M.Sc., Ph.D., Prof. — Dept. of Zool., Univ. of Poona, Ganeshkhind, POONA 7, India
  a. Transplantations of embryonic tissues. *Gallus* spec. *(Aves)*
  b. Effects of carcinogenic substances on the embryo. *Calotes versicolor (Lacertilia)*
  c. Chromatographic investigation of amino acids in embryonic and postembryonic stages of development. *Musca domestica (Diptera)*
  d. Experimental embryology. *Planorbis* spec. *(Pulmonata, Gastropoda)*
  e. Regeneration. *Pelmatohydra* spec. *(Hydroidea)*

MÜLLER, A. J. Dr. — Inst. f. Kulturpflanzenforsch. der Deutschen Akad. der Wiss. zu Berlin, GATERSLEBEN, Kr. Aschersleben, Deutsche Demokratische Republik
  a. Die Wirkung induzierter embryonaler Letalfaktoren. *Arabidopsis thaliana (Dicotyledona)*

MÜLLER, F. — Inst. de Zool. et d'Anat. comp., Univ. de Fribourg, FRIBOURG, Suisse
  a. Zur Morphogenese des Ductus nasopharyngeus und des sekundären Gaumendaches. *(Crocodilia)*

MÜLLER, G. Dr.habil., Prof. — Biol. Inst., Med. Akad., Erich-Weinertstr. 3, 3014 MAGDEBURG, Deutsche Demokratische Republik
  a. Die postembryonale Entwicklung der Organe (Gewichte) von Gerbillus pyramidum. *(Cricetidae, Rodentia)*

MÜLLER, K. E. Dipl.-Biol. — Physiol.-chem. Inst., Martin-Luther Univ., Hollystr. 1, HALLE (Saale), Deutsche Demokratische Republik
  a. Vorkommen und Veränderung proteolytischer Enzyme im tierischen Organismus in der Entwicklung. *Gallus domesticus (Aves)*

MÜLLER, M. M.Sc. — Inst. of Biol., Fac. of Med., ZAGREB, Šalata, Yugoslavia
  a. Action of several antimitotics on development. *Rattus norvegicus albinus (Rodentia)* (in collaboration with N. ŠKREB)

MÜLLER, W. A. Dr.rer.nat. — Zoophysiol. Inst. der Univ., Hölderlinstr. 12, 74 TÜBINGEN, Deutsche Bundesrepublik
  a. Differentiation within the colony; induction phenomena; sexual development of chimaeras. *Hydractinia echinata (Hydroidea)*
  b. Experimental morphology; regeneration; destruction of embryonic I-cells from other clones; marking of I-cells with ^{3}H; effect of drugs on morphogenesis and induction power. *Hydractinia echinata (Hydroidea)*

c. Asexual propagation. *Bougainvillia* spec. *(Hydroidea)*

MULNARD, J. G. M.D., M.I.I.E., Prof. — Lab. d'Anat. et d'Embryol. humaines, Fac. de Méd. et Pharmacie, Univ. libre de Bruxelles, 97 Rue aux Laines, BRUXELLES 1, Belgique

MUN, A. M. B.A., M.S., Ph.D., Prof. — Dept. of Zool., Univ. of Maine, ORONO, Maine, U.S.A.

a. Enhancement of growth of host spleens following chorio-allantoic grafts of homologous tissues. *Gallus gallus (Aves)*

b. Development of homograft reaction in the embryo. *Gallus gallus (Aves)*

MURAKAMI, U. M.D., D.Med.Sci., Prof. — Res. Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan

a. Effects of ionizing radiation upon the embryo. *Mus musculus (Rodentia)* (in collaboration with Y. KAMEYAMA, T. SAKURAI and K OHMORI)

b. Effects of reduced atmospheric pressures upon the embryo. *Mus musculus (Rodentia)* (in collaboration with Y. KAMAYAMA and K. OHMORI)

c. Effects of some chemical substances upon the embryo. *Mus musculus, Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

d. Mechanism responsible for malformations of the extremity in the embryo. *Mus musculus (Rodentia)* (in collaboration with Y. KAMEYAMA)

MURAMATSU, S. Ph.D. — Div. of Radiat. Hazards, Nat. Inst. of Radiol. Scis., 9-1, Anagawa 4, CHIBA, Japan

a. Morphological and functional effects of radiation on embryos. *Mus musculus (Rodentia)*

MURATORI, G. Dr.Med., o. Prof. Ist. di Anat., Univ. di Ferrara, Via Fossato di Mortara 66, FERRARA, Italia
(no embryological work in progress)

MURRAY, Mrs. M. R. M.I.I.E. — Dept. of Anat., Columbia Univ., NEW YORK 32, N.Y., U.S.A.

MURRAY, P. D. F. D.Sc., M.I.I.E. — Dept. of Zool., Univ. of New England, ARMIDALE 5 N., N.S.W., Australia

a. Development of adventitious cartilage in the embryo. *Gallus domesticus (Aves)*

MUTH, F. W. Dr.rer.nat. — Inst. fr Entw.physiol., Univ. zu Köln, Gyrhofstr. 17, KÖLN-Lindenthal, Deutsche Bundesrepublik

a. Development of the eye pigmentary system and gene controlled pigment synthesis during pupal stages (photometry and chromatography of pigments). *Ephestia kühniella (Lepidoptera)*

MUTOLO, V. M.D. — Ist. di Anat. comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia

a. Protein synthesis in embryogenesis. *Paracentrotus lividus (Echinoidea)*

NAAKTGEBOREN, C. Dr. — Zool. Lab., Univ. of Amsterdam, Plantage Doklaan 44, AMSTERDAM C., Netherlands

a. Development of foetus with regard to birth. *(Mammalia)*

NACE, G. W. A.B., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich. 48104, U.S.A.

a. Serological and electrophoretic study of proteins of the embryo *Rana pipiens (Anura)*

b. Study of maternal-egg relationships, particularly as they relate to fertilization. *Rana pipiens (Anura)*
c. Immuno-histologic analysis of development using fluorescent antibody. *Rana pipiens (Anura)*
d. Immunochemical analysis of renal adenocarcinoma. *Rana pipiens (Anura)*

NADA, O. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Electron microscope study on regenerating limbs. *Hynobius dunni (Urodela)*
b. Electron microscope study on developing retinal cells. *Triturus pyrrhogaster (Urodela)*

NADAMITSU, S. D.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan
a. In vitro ovulation. *Mus musculus (Rodentia)*
b. Further development of ova in vitro. *Mus musculus (Rodentia)*
c. Tissue culture. *Rana* spec. *(Anura)*

NAGAO, Z. D.Sc. — Akkeshi Marine Biol.Station, Hokkaido Univ., AKKESHI, Japan
a. Development and life history of marine forms. *(Hydrozoa)*

NAIR, K. S. S. Ph.D. — Dept. of Zool., M.S.Univ. of Baroda, BARODA 2, India
a. Physiology of metamorphosis. *Anthrenus vorax, Trogoderma granarium (Dermestidae, Coleoptera)* (in collaboration with G. K. KARNAVAR)

NAKAMURA, I. M.D., Prof. — Dept. of Anat., Fukushima Med. Coll., Sugitsuma-cho 5 — 75, FUKUSHIMA, Japan
a. Analysis of prospective areas and differentiation potencies in the epiblast of the blastoderm. *Gallus domesticus (Aves)*
b. Analysis of developmental mechanism of the alimentary tract. *(Amphibia), Homo sapiens (Primates)*

NAKAMURA, K. M.D., Dr.Med.Sci., Prof. — Dept. of Anat., Div. I, Kobe Univ. School of Med., Kusunoki-cho 7, Ikuta-ku, KOBE, Japan
a. Experimental teratological studies of the central nervous system (direct interference with foetal brain in utero). *Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*

NAKAMURA, O. D.Sc., M.I.I.E., Prof. — Biol. Lab., Osaka Gakugei Univ., Ten-noji-ku, OSAKA, Japan
a. Map of presumptive regions and formative movements. *Rana* spec. *(Anura)*
b. Cytodifferentiation during cleavage. *(Amphibia)*
c. Cell interactions in relation to cytodifferentiation. *(Amphibia)*
d. Changes in subcellular fine structures during early development. *(Amphibia)*

NAKANO, E. M.A., D.Sc., M.I.I.E. — Biol. Inst., Fac. of Sci., Nagoija Univ., Chikusa-ku, NAGOYA, Japan
a. Metabolic analysis of early development. *Hemicentrotus pulcherrimus (Echinoidea), Oryzias latipes (Teleostei)*

NAKANO, Y. M.D., Prof. — Dept. of Anat., Kansai Med. School, Fumizono-cho, Moriguchi, OSAKA, Japan

NAKAYAMA, T. M.B., M.D. — Anat. Inst., Med. Fac., Nihon Univ., No. 30, Ooyaguchi-kamimachi, Itabashi-ku, TOKYO, Japan

a. Embryological studies on the venae cordis minimae. *Homo sapiens (Primates)*

b. Researches on the changing courses of the arteries in the fetal period. *Homo sapiens (Primates)*

c. Embryological studies on the muscular coats of the oesophagus. *Homo sapiens (Primates)*

NAKAZAWA, T. Ph.D. — Div. of Biol., Nat. Inst. of Radiol. Scis., Anagawa 4-9. CHIBA, Japan

a. Effects of ionizing radiations on the biochemical mechanism of embryonic development. *Artemia salina (Anostraca, Crustacea)*

b. Changes in nucleic acids and some other phosphorous fractions of tissues during late embryonic and early postnatal development. *Rattus norvegicus (Rodentia)*

NARBAITZ, R. M.D. — Inst. de Anat. Gener. y Embriol., Fac. de Med., Paraguay 2155, BUENOS AIRES, Argentina

a. Gonadal differentiation (organ culture and electron microscopy). *Gallus domesticus (Aves)*

NATON, E. Dr.rer.nat. — Bayer. Landesanstalt für Bodenkultur, Pflanzenbau und Pflanzenschutz, Menzingerstr. 54 (Postfach), MÜNCHEN 38, Deutsche Bundesrepublik

a. Manifestations of experimental carnitine deficiency: alimentary canal, moulting, endocrine glands, deposition of fat and glycogen. *Tribolium destructor (Tenebrionidae, Coleoptera)*

b. Problems connected with longevity and fecundity. *Tribolium destructor (Tenebrionidae, Coleoptera)*

c. Rearing and sterilization. *Psila rosae (Diptera)*

d. Rearing methods. *(Coccinellidae, Coleoptera)*

NAYLOR, E. B.Sc., Ph.D. — Dept. of Zool., Univ. Coll. of Swansea, Singleton Park, SWANSEA, Glamorganshire, Wales

NEBEL, L. A. M.D. — Dept. of Anat., The Hebrew Univ. — Hadassah Med. School, P.O.Box 1172, JERUSALEM, Israel

a. Effect of external physical factors on early development. *Gallus domesticus (Aves); Rattus rattus (Rodentia)*

b. Effect of different experimental conditions on the structure of the endometrium and on implantation. *Mus norvegicus albinus, Rattus rattus (Rodentia)*

NEDVÍDEK, J. M.Sc. — Dept. of Gener. and Exp. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia

a. Nucleic acids and subcellular particles in oogenesis and early development. *(Amphibia)* (in collaboration with Mrs. V. VILÍMKOVÁ (HABROVÁ))

NEEDHAM, A. E. M.A., D.Sc. — Dept. of Zool., Parks Rd., OXFORD, England

a. Autolytic activity. *Erpobdella octoculata (Hirudinea)*

b. Histological aspects of limb regeneration. *Asellus aquaticus (Isopoda, Crustacea)*

NEEDHAM, J. Dr., F.R.S., M.I.I.E., Prof. — Biochem. Inst., Tennis Court Rd., CAMBRIDGE, England

NEOGY, R. K. Dr. — Chittaranjan National Cancer Research Centre, 37 S. P. Mookerjee Rd., CALCUTTA 26, India

NETELENBOS, A. H. I. Med.drs. — Div. of exper.Morphol., Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands

a. Tracer studies in the course of regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

NEULAT, Miss M. M. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Métabolisme des acides nucléiques dans la gonade et dans la glande séricigène. *Bombyx mori (Lepidoptera)*

NEUMANN, D. Dr.rer.nat. — Zool. Inst. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik

a. Lunar periodicity of metamorphosis. *Clunio marinus (Chironomidae, Diptera)*

NEW, D.A.T. M.A., Ph.D. — Strangeways Research Lab., Wort's Causeway, CAMBRIDGE, England

a. Study of embryos developing in vitro. *(Mammalia)*

NEWBURGH, R. W. B.S., M.S., Ph.D., Prof. — Science Research Inst., Oregon State Univ., CORVALLIS, Ore. 97331, U.S.A.

a. Chemical and biochemical changes during development.

NEWTH, D. R. B.Sc., Ph.D., M.I.I.E., Prof. — Dept. of Zool., the University, GLASGOW W. 2, Scotland

a. Regeneration of defective organs. *(Amphibia)*

b. Morphogenetic effect of homologous DNA administered to eggs and embryos. *Siredon mexicanum, Xenopus* spp. *(Amphibia)*

NEYFAKH, A. A. Dr.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Nucleo-cytoplasmic interaction in development: the role of the nucleus in biochemical differentiation. *Misgurnus fossilis (Cobitidae, Teleostei)*

b. Mitochondria in development.

c. The action of antibiotics and nucleotide analogues on development. *Strongylocentrotus dröbachiensis (Echinoidea)*

NGUYEN-H-ANH, Mrs. J. Lic.ès Sci., Dipl. d'Etudes Sup. — Inst. Natl. de la Santé et de la Recherche Méd., Unité de Physiol. placentaire, Hôpital St. Antoine, 184 Rue du Faubourg St.-Antoine, PARIS XIIe, France

a. Microscopie électronique des tissus placentaires. *Homo sapiens (Primates)*

NIAZI, I. A. B.Sc., M.Sc., Ph.D. — Dept. of Zool., Univ. of Rajasthan, JAIPUR, India

a. Limb and tail regeneration. *Entosphenus lamottenii, Petromyzon marinus (Petromyzontidae, Cyclostomata), Bufo* spec., *Rana* spec. *(Anura)*

b. Enzyme studies during limb regeneration. *Bufo* spec., *Rana* spec. *(Anura)*

c. Differentiation of neural plate into tail mesoderm. *Ambystoma mexicanum (Urodela)*

d. Lens regeneration in embryos in vitro. *Gallus domesticus (Aves)*

NICOLET, G. D.Sc. — Lab. d'Embryol. expér., Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue de l'Ecole de Médecine, GENÈVE, Suisse

a. The action of Lithium chloride on the embryo. *Gallus domesticus (Aves)*
b. Studies of the fate of the different parts of the primitive streak with the help of grafts labelled with tritiated thymidine. *Gallus domesticus (Aves)*

NIE, C. J. van D.V.M. — Veter. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands
— private address: Pasteurstr. 1, LEIDEN, Netherlands

a. Ontogenetic malformations of the heart. *Sus scrofa, Bos taurus (Artiodactyla)*
b. Pathological development of heart and vessels. *Sus scrofa, Bos taurus (Artiodactyla)*
c. Pathological development of bone. *Sus scrofa (Artiodactyla)*

NIERMEYER, Miss E. K. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a. Influence of actinomycin and other antibiotics on certain stages of development. *Limnaea stagnalis (Gastropoda)*

NIEUWKOOP, P. D. Phil.Dr., M.I.I.E., Prof. — Hubrecht Lab. (Intern. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands

a. Analysis of neural and mesodermal competence of the ectoderm with various techniques. *Ambystoma mexicanum (Urodela)* (in collaboration with J. G. BLUEMINK and Miss G. A. UBBELS)
b. Pattern formation in artificially activated ectoderm. *Ambystoma punctatum, A. mexicanum, Rana pipiens (Amphibia)*
c. Analysis of pattern formation in the prosencephalic portion of the neural plate in normal development. *Triturus* spp. *(Urodela)* (in collaboration with Miss E. C. BOTERENBROOD)
d. Causal analysis of early development. *Locusta migratoria, Gryllus domesticus (Orthoptera)*

NIGON, V. Dr.ès Sci., Prof. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Métabolisme des acides nucléiques durant la gamétogénèse et le développement. *Parascaris equorum (Nematoda), Drosophila melanogaster (Diptera), Bombyx mori, Galleria mellonella (Lepidoptera), Arbacia lixula (Echinoidea)*
b. Métabolisme dans des diverses phases de l'évolution. *Euglena gracilis (Flagellata)*

NIIZIMA, M. M.D., Ph.D., Prof. — Dept. of Anat., Fac. of Med., Tokyo Med. and Dental Univ., Yushima 3, Bunkyo-ku, TOKYO, Japan

a. Tissue culture studies on metamorphosis. *Rana catesbiana, R. japonica, Bufo vulgaris (Anura)*
b. Tissue culture studies on the development and differentiation of dental tissues. *Rattus norvegicus albus, Felis domestica, Homo sapiens (Mammalia)*
c. Tissue culture studies on cell differentiation. *Gallus domesticus (Aves)*
d. Identification of fibroblasts in tissue culture. *Gallus domesticus (Aves), Rattus norvegicus, Homo sapiens (Mammalia)*

NIKITINA, Mrs. L. A. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
  a. The nature of the specificity of oocyte nuclei in the process of oocyte maturation. *(Amphibia)* (in collaboration with Mrs. T. A. DETTLAFF)

NIKOLSKAJA, Miss I. S. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
  a. Developmental biochemistry and physiology (respiration, blood pigments, action of respiratory inhibitors, contractile proteins), *Strongylocentrotus dröbachiensis (Echinoidea), Misgurnus fossilis, Salmo salar (Teleostei), (Amphibia)*

NIRSÉN, C. M.D. — Dept. of Histol., Karolinska Inst., Solnavägen 1, STOCKHOLM 60, Sweden
  a. Histogenesis of muscle tissue.

NISHIMURA, H. M.D., Prof. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO, Japan
  a. Modification of susceptibility to teratogenesis. *Mus musculus (Rodentia)*
  b. Evaluation of tests on drug teratogenicity safety. *Mus musculus, Rattus norvegicus (Rodentia), Oryctolagus cuniculus (Lagomorpha)*
  c. Anomalies in early embryos and maternal factors. *Homo sapiens (Primates)*

NISHIOKA, Miss M. D.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan
  a. Synthesis of amphidiploids. *(Ranidae, Anura)*
  b. Synthesis of nucleo-cytoplasmic hybrids between different species. *(Ranidae, Anura)*

NIU, M. C. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Temple Univ., PHILADELPHIA 22, Pa., U.S.A.

NIWELIŃSKI, J. M. Ph.D. — Dept. of Biol. and Embryol., Acad. of Med., ul. Kopernika 7, KRAKÓW, Poland

NIXON, D. A. M.Sc., Ph.D. — Physiol. Dept., St. Mary's Hosp. Med. School, Paddington, LONDON W.2, England
  a. Perfusion of the isolated foetus. *Ovis aries (Artiodactyla)*
  b. Development of renal function. *Ovis aries (Artiodactyla)*

NOBILI, R. Dr.Biol.Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
  a. Reproduction and cytology. *(Ciliata)*

NOGAMI, H. M.D. — Henry Phipps Inst., Univ. of Pennsylvania, School of Med., 4219 Chester Avenue, PHILADELPHIA 4, Pa., U.S.A.
  a. Digital malformations in the embryo caused by X-radiation. *Mus musculus (Rodentia)*

NOLTE, H. v. d. V. B.Sc. — Dept. of Zool., Fac. of Sci., Univ. of Pretoria, PRETORIA, Republic of South Africa

NONAMI, Y. D.Agr.Chem., Prof. — Fac. of Agric., Univ. of Niigata, 106. Koganecho, NIIGATA, Japan
  a. Dialyzable oligosaccharides of yolk plasma of the incubated egg (fate of sugars and glycoproteins during incubation and preservation of eggs). *Gallus domesticus (Aves)*

NORMAN, C. B.S., M.S., Ph.D., Prof. — Dept. of Biol., West Virginia Univ., MORGANTOWN, W.Va., U.S.A.

a. The intracellular distribution of sulfhydryl groups in embryonic, adult and tumorous tissues. *Rana pipiens (Anura)*
b. Effects of pH on the metabolism and fertilizing capacity of spermatozoa cultured in vitro. *(Mammalia)*
c. Effects of light on spermatozoa. *(Mammalia)*
d. Physiology and biochemistry of germ cells. *(Mammalia)*
e. Physiological and biochemical basis of cell senescence.

NØRREVANG, A. M.Sc. — Inst. of Comp. Anat., Universitetsparken 3, COPENHAGEN Ø, Denmark
a. Embryology. *Armillifer* spec. *(Linguatulida)* (in collaboration with K. G. WINGSTRAND)
b. Oogenesis (histological, histochemical and ultrastructural). *Priapulus caudatus (Priapulida)*

NÖTHIGER, R. Dipl.Sc.Nat. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

NOUMURA, T. N. D.Sc. — Misaki Marine Biol. Station, Univ. of Tokyo, MISAKI, Kanagawa-ken, Japan
a. Development of the endocrine system in the embryo and its relation to the maternal system. *Rattus* spec. *(Rodentia)*
b. Identification of gamete-shedding substance in radial nerves. *Asterias amurensis, Asterina pectinifera (Asteroidea, Echinodermata)*

NOVÁK, V. J. A. D.Sc. — Dept. of Insect Physiol., Entomol. Inst., Czechoslovak Acad. of Sci., Na Folimance 5, PRAHA 2, Czechoslovakia

NOWAK, A. Lek.med. (Physician) — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. The influence of estrogens on mitotic regulation. *Mus musculus (Rodentia)*
b. The mitotic regulation in the regenerating tadpole. *Xenopus laevis (Anura)*

NOWAKÓWNA, Miss J. D.Sc. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. The morphogenetic functions of the thyroid gland and hypophysis. *(Amphibia; Reptilia; Aves)*
b. Pigmentation and the endocrine glands. *(Amphibia)*

NOYES, R. W. M.D., Prof. — Dept. of Anat., Pacific Biomed. Research Center, 2538 The Mall, HONOLULU, Hawaii 96822, U.S.A.
a. Ovum transfers in study of implantation. *(Mammalia)*
b. Tubal transport of spermatozoa and ova. *(Mammalia)*
c. Endometrial development. *Homo sapiens (Primates)*

NÜESCH, H. Dr.sc.nat., Prof. — Zool. Anstalt der Univ., Rheinsprung 9, 4000 BASEL, Schweiz
a. Einfluss des Nervensystems auf die Entwicklung anderer Organe. *(Insecta)*
b. Entwicklung der imaginalen Muskeln. *(Lepidoptera)*
c. Entwicklung des Nervensystems. *(Insecta)*
d. Entwicklung der Muskelkontraktilität. *(Lepidoptera)*

NUMANOI, H. Ph.D., Prof. — Biol.Inst., Coll. of Gen. Education, Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan
a. Biochemical studies on differentiation. *(Echinoidea)*
b. Biochemical studies on pearl formation. *(Mollusca)*

NUSSBAUM, N. S. B.A., M.A., Ph.D. — Dept. of Biol., Wright State Univ., DAYTON, Ohio 45431, U.S.A.

a. Hormonal aspects of mineralization as studied in hypophysectomized, mature animals (using regenerating scales as test objects). *Carassius auratus, Fundulus heteroclitus (Teleostei)*

NWAGWU, M. B.Sc. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

a. Effects of chloramphenicol on the morphological and enzymatic differentiation of developing systems. *Xenopus laevis (Anura), Gallus domesticus (Aves)*

OBIKA, M. B.S., M.A., D.Sc. — Dept. of Biol., Keio Univ., YOKOHAMA-Hiyoshi, Japan

a. Correlation between pigment formation and pterin derivatives during development. *(Amphibia)*

b. Experimental and electron microscopic studies on the cytodifferentiation of chromatophores. *Hynobius tokyoensis, H. nigrescens, Ambystoma mexicanum, Triturus pyrrhogaster, (Urodela), Xenopus laevis, Bufo vulgaris, Rana japonica (Anura)*

O'BRIEN, B. R. A. B.Sc., Ph.D. — School of Anat., Univ. of New South Wales, SYDNEY, N.S.W., Australia

a. The effect of some non-ionic surface-active agents on the development of the embryo in vitro (particularly cell movement). *Gallus domesticus (Aves)*

ODA, S. D.Sc., Prof. — Biol. Lab., St. Paul's Univ., Ikebukuro, TOKYO, Japan

a. Germination of statoblasts. *Lophopodella carteri (Phylactolaemata, Bryozoa)*

O'FARRELL, A. F. B.Sc., A.R.C.S., Prof. — Dept. of Zool., Univ. of New England, ARMIDALE 5 N., N.S.W., Australia

a. Regeneration and the endocrine system. *Blattella germanica (Dictyoptera, Insecta)* (in collaboration with A. STOCK and Miss J. MORGAN)

OGAWA, T. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. Serological studies on lens regeneration and lens formation. *Triturus pyrrhogaster (Urodela)*

OGAWA-MATSUDA, Mrs. N. D.Sc. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. Studies of the "fused" mutant. *Oryzias latipes (Teleostei)*

b. Genetical studies of hatching enzymes and mechanisms controlling their secretion. *Oryzias latipes (Teleostei)*

OGREN, R. E. A.B., M.S., Ph.D. — Dept. of Biol., Wilkes Coll., WILKES-BARRE, Pa. 18703, U.S.A.

a. Embryonic development (maturation, cleavage). *Hymenolepis diminuta (Cyclophyllidae, Cestodes)*

b. Structure and development of hexacanth embryos (oncospheres). *Hymenolepis diminuta (Cyclophyllidae, Cestodes)*

c. Differentiation of hooks in oncoblasts of immature embryos. *Hymenolepis diminuta (Cyclophyllidae, Cestodes)*

d. Differentiation and movement of embryonic myoblasts. *Hymenolepis diminuta (Cyclophyllidae, Cestodes)*

OHMORI, K. — Res. Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan
  a. Effects of some external agents upon the regional differentiation of the vertebrae. *Mus musculus (Rodentia)* (in collaboration with U. MURAKAMI and Y. KAMEYAMA)

OHNO, S. D.V.M., Ph.D., D.Sc. — Dept. of Biol., City of Hope Med Center, DUARTE, Calif., U.S.A.
  a. Oogenesis. *Mus musculus, Microtus oregoni (Rodentia), Bos taurus (Artiodactyla)*

OHSAKI, K. — Biol. Inst., Fac. of Sci., Univ. of Kanazawa, Marunouchi -1, KANAZAWA, Japan
  a. Development of egg. *Dugesia japonica (Turbellaria)*
  b. Reaggregation of dissociated cells. *Callyspongia elongata (Porifera)*

OJEDA SAHAGUN, J.L. Dr. en Med. — Servicio de Embriol. Exper., Depto Anat. Prof. Dr. P. Gomes Bosque, Fac. de Med. de Valladolid, VALLADOLID, Spain
  a. Experimental malformations of the ocular apparatus, and their repercussions on the nervous system. *Gallus domesticus (Aves)*
  b. Biochemical and ultrastructural effects of barbituric compounds on the embryo. *Gallus domesticus (Aves)*

OJIMA, Y. D.Sc. — Biol. Lab., Fac. of Sci., Kwansei Gakuin Univ., NISHINOMIYA, Japan

OKA, H. Ph.D., M.I.I.E., Prof. — Inst. of Zool., Tokyo Kyoiku Univ., Otsuka-Kubo-machi 24, Bunkyo-ku, TOKYO, Japan
  a. Metamorphosis of compound forms. *Perophora japonica (Ascidia)*
  b. Colony-specificity and selective fertilization in compound forms. *Botryllus primigenus (Ascidia)* (in collaboration with H. WATANABE)
  c. Transplantation experiments with the egg. *Tachypleus tridentatus (Xiphosura, Arachnida)* (in collaboration with K. SEKIGUCHI)

OKADA, M. Ph.D. — Inst. of Zool., Tokyo Kyoiku Univ., Otsuka-Kubo-machi 24, Bunkyo-ku, TOKYO, Japan
  a. The development of pole cells and polar granules studied by electron microscopy. *Chironomus dorsalis (Diptera)*

OKADA, T.S. D.Sc., M.I.I.E. — Lab. of Developmental Biol., Zool. Inst. Fac. of Sci., Univ. of Kyoto, KYOTO, Japan
  a. Immunological studies on the synthesis of tissue proteins in embryos. *Gallus domesticus (Aves)*

OKADA, Y.K. M.J.A., Dr., M.I.I.E., Prof. — National Science Museum, Ueno Park, Daito-ku, TOKYO, Japan
  a. Histo- and cytological studies on sex-reversal. *Halichoeres poecilopterus (Labridae), Oryzias latipes, Gambusia affinis (Cyprinodontidae), Mylio macrocephalus (Sparidae), Fluta alba (Symbranchi), Sacura margaritacea (Serranidae, Teleostei)*
  b Origin of bisexual gonad and its sexual conversion. *Mylio macrocephalus (Sparidae, Teleostei)*

OKAZAKI, Miss K. O. Dr., M.I.I.E. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

OKSCHE, A. Dr.med., Prof. — Anat. Inst., Justus-Liebig-Univ., Friedrichstr. 24, GIESSEN, Deutsche Bundesrepublik

a. Vergleichende Studien über die Entwicklung, cytologische Differenzierung, Cytodynamik und Funktion der Epiphyse und des Subcommissuralorgans; potenzen des Neuralrohrepithels und ihre Realisierung. Typische Vertreter aller Klassen *(Vertebrata)*

OLDFIELD (WHITEHEAD), Mrs. E. B.Sc., M.Sc., Ph.D. — Science Dept., Coombe Secondary School for Girls, Clarence Ave., NEW MALDEN, Surrey, England

a. Embryology of a freshwater species from Ghana. *Egeria radiata (Donacidae, Tellinaceae, Lamellibranchiata)*

OLIVEREAU, Miss M.M.A. Dr.ès Sci. — Lab. de Physiol., Inst. Océanographique, 195 Rue St. Jacques, PARIS Ve, France

a. Cytology and histochemistry of endocrine glands in relation with development, and after various experimental procedures. *(Salmonidae)*
b. Study of pituitary grafting. *Mollienesia formosa (Cyprinodontidae)*
c. Histophysiology of endocrine glands. *Anguilla anguilla (Anguillidae)*
d. Hypophyseal-adrenocortical relationships, with chemical inhibitors, using histological techniques. *(Salmonidae, Anguillidae, Poecilia)*

OLIVO, O.M. M.I.I.E., Prof. — Ist. di Anat. Umana Normale, Univ. di Bologna, Via Irnerio 48, BOLOGNA, Italia

a. Differentiation and dedifferentiation of embryonic heart myofibrils in vitro (electron microscopy). *Gallus gallus (Aves)*

OLSSON, I. Fil.mag. — Zool. Inst., Univ. of Gothenburg, Fjärde Långgatan 7B, GÖTEBORG-SV, Sweden

a. Experimental pressure and gas studies on embryos. *Gallus* spec. *(Aves)*

ONUMA, H. Dr. — Nat. Inst. of Animal Industry, CHIBA-shi, Japan

OOISHI, Miss S. D.Sc. — Zool. Inst., Fac. of Fisheries, Pref. Univ. of Mie, 11, Ootanicho, TSU, Mie Pref., Japan

a. Postembryonic development. *(Notodelphyidae, Copepoda)*

OPPENHEIMER, Miss J.M. A.B., Ph.D., M.I.I.E., Prof. — Dept. of Biol., Bryn Mawr Coll., BRYN MAWR, Pa., U.S.A.

a. Studies on the optic cup-lens induction systems. *Fundulus heteroclitus (Teleostei), Rana pipiens (Anura)*

O'RAHILLY, R. M.Sc., M.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., St. Louis Univ., 1402 South Grand Blvd., ST LOUIS, Mo. 63104, U.S.A.

a. Morphogenesis, developmental histochemistry, and ultrastructure of embryonic eye. *Gallus domesticus (Aves), Homo sapiens (Primates)*

ORGEBIN (CRIST), Mrs. M. C. D. Univ.Lyon — Dept. of Obstetrics and Gynecol., Vanderbilt Univ. School of Med., NASHVILLE, Tenn. 37203, U.S.A.

a. Physiology of sperm transport and maturation in the male, *(mammalia)*

ORLOVA, Mrs.I.I. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.

a. Study of proliferation processes in the organs and organ primordia of embryos. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

ORSINI, Mrs. M.C. WARD B.A., Ph.D., M.I.I.E. — Dept. of Anat., Bardeen Med. Labs., Univ. of Wisconsin, MADISON, 6, Wis., U.S.A.

a. Fetal membranes, giant cells and pregnancy changes in uterine vessels. *Mesocricetus auratus (Rodentia)*
b. Delayed implantation. *Mesocricetus auratus (Rodentia)*

c. Decidualization in pregnant and pseudopregnant females. *Mesocricetus auratus, Rattus norvegicus (Rodentia)*

ORTOLANI, Miss G. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia
a. Induction processes in embryonic development. *(Ascidiae)*
b. Embryology. *(Ctenophora)*
c. Transplantation of nuclei. *(Amphibia)*

ORTS LLORCA, F. M.I.I.E., Prof. — Lab. de Anat. y Embriol., Fac. de Med., Ciudad Univ., MADRID, Spain
a. Détermination et différenciation du coeur. *Gallus* spec. *(Aves)*

O'STEEN, W.K. B.A., M.S., Ph.D., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, TEX., U.S.A.
a. Regeneration of the intestine after transection of gut in one to several sites; reversal of segments; looping of segments. *Diemictylus viridescens virid. (Urodela)*
b. Regeneration of intestine in larval forms after simple single transections of loops of the coiled intestine, and re-establishment of functional intestine after removal of large percentage of digestive tract; effects on metamorphosis. *Rana clamitans (Anura)*
c. Radioautographic studies of regeneration (cell renewal) in forelimb and intestine. *Diemictylus viridescens (Urodela)*
d. Regeneration and growth of normal and dystrophic skeletal muscle. *Mus musculus (Rodentia)*

OTSUKI, K. — Nat. Inst. of Animal Industry, CHIBA-shi, Japan

OTZCHELI, Mrs. T. A. Cand.biol.sci. — Dept. of Animal Embryol., Inst. of Zool., Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.
a. Physiological regeneration of the uterus. *Microtus socialis (Cricetidae, Rodentia)*
b. Influence of bacteria on the parenchymal embryonal tissue. *Gallus gallus (Aves)*

OVERTON, Mrs. J. H. Ph.D., M.I.I.E. — Dept. of Zool., Biol. Sci. Div. Univ. of Chicago, CHICAGO, Ill., U.S.A.
a. Cell adhesion in early development. *Gallus domesticus (Aves)*
b. Development of microvilli. *Mus musculus (Rodentia)*

OVTRACHT, Miss L.P. — Lab. de Biol. génér., Fac. des Scis., B.P.347, REIMS (Marne), France
a. 5-Bromodeoxyuridine action on early developmental stages. *Gallus domesticus (Aves)*

OWERS, N. O. Ph.D. — Dept. of Anat., School of Med., State Univ. of Iowa, IOWA CITY, Iowa, U.S.A.

OWMAN, Ch. Docent — Dept. of Anat., Univ. of Lund, Biskopsgatan 7, LUND, Sweden
a. Comparative studies on the fetal pineal gland. *(Mammalia)*
b. Experimental investigations on the developing pineal gland. *Rattus* spec. *(Rodentia)*
c. Experimental investigations on the developing hypothalamus. *Rattus* spec. *(Rodentia)*

OWRE (BOEHME), Mrs. M.H. A.B., M.S., Ph.D. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, MIAMI, Fla. 33149, U.S.A.

a. Developmental biology of common local forms. *Millepora alcicornis (Hydrocorallina), Onuphis magna, Loimia medusa (Polychaeta), Astraea tecta americana, Batillaria minima, Fasciolaria tulipa, Haminoea antillarum (Gastropoda), Atrina rigida, Anodontia alba, Chione cancellata (Lamellibranchia), Holothuria floridana (Holothuroidea)*

OZAKI, H. Ph.D. — Dept. of Devel.Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif., U.S.A.
a. An examination of the kinds of electrophoretically separable proteins formed during early development and under various experimental conditions. *Strongylocentrotus purpuratus (Echinoidea)*

OŻDŻEŃSKI, W. M.Sc. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
a. Origin and fate of primordial germ cells. *Mus musculus (Rodentia)*

OZEKI, K. D.Sc. — Biol. Inst., Coll. of Gen. Education, Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan
a. Hormonal regulation of metamorphosis. *Anisolabis maritima (Dermaptera)*
b. Control of the secretion of juvenile hormone. *Anisolabis maritima (Dermaptera)*

PACKER, A.D. M.Sc., M.D. — Dept. of Anat. and Histol., Univ. of Adelaide, ADELAIDE, S.Austr., Australia
a. Experimental teratology. *(Rodentia)*

PADYKULA, Miss H. A. B.S., M.A., Ph.D., Prof. — Dept. of Biol., Wellesley Coll., WELLESLEY, Mass. 02181, U.S.A.
a Placentation (cytochemistry, ultrastructure). *(Mammalia)*
b. Development of skeletal muscle and intestine (cytochemistry, ultrastructure). *(Mammalia)*

PAGER, Miss J. Lic.es Sci. — Lab. de Physiol. anim., Fac. des Sci., Route de Limoges, POITIERS (Vienne), France
a. Electrophysiological study of embryonic muscles. *Rattus norvegicus (Rodentia)*

PAI, Mrs. A. C. Ph.D. — Dept. of Genetics, Albert Einstein Coll. of Med., Eastchester Road and Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.
a. Developmental physiology. *Mus musculus (Rodentia)*
b. Developmental genetics. *Mus musculus (Rodentia)*
c. Developmental pathology. *Mus musculus (Rodentia)*

PAI, M.L. M.Sc., Ph.D. — Dept. of Biochem., Med. Coll., BARODA, Gujarat State, India
a. Effect of diets containing different protein levels on liver regeneration after partial hepatectomy. *Rattus norvegicus (Rodentia)*
b. RNA and DNA contents of regenerated liver tissue. *Rattus norvegicus (Rodentia)*

PAI. S. Dr.rer.nat., M.I.I.E. — Lab. of Developm. Physiol., Inst. of Exper. Biol., Acad. Sinica, 320 Yo Yang Road, SHANGHAI, China

PALA. Miss M. Dr. — Ist. di Biol. e Zool. gener., Univ. di Sassari, SASSARI, Sardegna, Italia
a. Research on the origin of acleioencephalic embryos. *Gallus* spec. *(Aves)*

PALMA, A. Med.Dr. — Ist. di Anat. Umana Normale, Univ. di Roma, Viale Regina Elena 289, ROMA, Italia
a. Sullo sviluppo del mediastino. *Homo sapiens (Primates)*

b. Sullo sviluppo del pancreas. *Homo sapiens (Primates)*
c. Studi istochimici sulla barriera placentare. *Homo sapiens (Primates)*
d. Studi istochimici sulla placca coriale della placenta. *Homo sapiens (Primates)*

PANIGEL, M. Dr.en Méd., Dr.ès Sci., Prof. — Inst. Natl. de la Santé et de la Recherche Médicale, Unité de Physiol. placentaire, Hôpital St. Antoine, 184 Rue du Faubourg St.-Antoine, PARIS XIIe, France
a. Placental structure and function: ultrastructural and perfusion studies (morphology, physiology and pathology). *Cavia* spec., *Mus* spec. *(Rodentia)*, *Homo sapiens (Primates)*

PANITZ, R. Dr. — Inst.f.Kulturpflanzenforsch. der Deutschen Akad. der Wiss. zu Berlin, GATERSLEBEN, Kr. Aschersleben, Deutsche Demokratische Republik
a. Gene activities in salivary gland chromosomes (puffing) and their relation to development. *Acricotopus lucidus (Chironomidae, Diptera)*
b. Control mechanism of puffing. *Acricotopus lucidus (Chironomidae, Diptera)*

PANNESE, E. M.D., Prof. — Dept. of Histol. and Embryol., Inst. of Human Anat., Univ. of Bari, Policlinico, BARI, Italia
a. Electron microscope study of the differentiation of embryonic spinal ganglion neuroblasts (particularly mitochondria). *Gallus gallus (Aves)*

PANTELOURIS, E.M. B.Sc., Ph.D. — Dept. of Zool., Queen's Univ., BELFAST, N.Ireland
a. Effects of radiation on foetuses, and means of alleviating them. *Mus musculus (Rodentia)*
b. Ontogenesis and inheritance of lymph proteins. *Drosophila melanogaster (Diptera)*

PAPACONSTANTINOU, J. M.S., Ph.D. — Biol. Div., Oak Ridge Natl. Lab., P.O. Box Y, OAK RIDGE, Tenn. U.S.A.

PARISI, V. Dr. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italia
a. Development of hemocyanin. *(Crustacea; Mollusca)*

PARK, Miss H.D. B.S., M.S., Ph.D. — Natl. Inst. of Arthritis and Metabolic Diseases, BETHESDA. Md.20014, U.S.A.
a. Induction of differentiation of the male gonad. *Hydra littoralis (Hydroidea)*
b. Relationship of growth and sexual differentiation to temperature changes. *Hydra pseudoligactis (Hydroidea)*

PARNELL (KING), Mrs. J. B.Sc., M.B., B.Ch., Prof. — Dept. of Anat. Schools of Med. and Dent., Georgetown Univ., 3900 Reservoir Road, N.W., WASHINGTON, D.C. 20007, U.S.A.
a. Relationship of neurons and oligodendroglia from development to old age. *Mus musculus (Rodentia)*

PARRISH, F.K. B.A., A.M. — Dept. of Biol., Georgia State Coll., ATLANTA, Ga., U.S.A.
a. Investigation of spatial differences in cell surface permeability, and its place in the differentiation of a cell. *Nassarius vibex (Prosobranchia, Gastropoda)*
b. Cytochemical studies on both normal and centrifuged eggs and embryos. *Nassarius vibex, N. obsoletus (Prosobranchia, Gastropoda)*

PASCHMA, M. D.Sc. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland

a. Normal development and regeneration. *(Enchytraeidae, Oligochaeta)*

PASCUAL, Miss A. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289, TUCUMAN, Argentina.

a. The tricarboxylic acid cycle in developing eggs. *Bufo arenarum (Anura)*

PASQUINI, P. Ph.D., M.I.I.E., Prof. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italia

a. Growth and differentiation of regeneration blastema in vivo and in vitro. *Planaria torva, Dugesia etrusca (Turbellaria)* (in collaboration with Miss A.P.BORRELLI)

b. Growth and differentiation in regeneration. *Planaria* spec. *(Turbellaria)* (in collaboration with H.MANELLI)

PASSAPONTI, A. Dr.Med.& Surgery, Prof. — Ist. di Anat. Umana Normale dell' Università, Via Biblioteca 4, CATANIA, Italia

a. The morphological aspect of embryo atrophy. *Homo sapiens (Primates)*

b. The morphogenesis of anencephaly. *Homo sapiens (Primates)*

c. The development of the inguinal canal. *Homo sapiens (Primates)*

d. A new method of tissue grafts in the allantoic cavity. *Gallus domesticus (Aves)*

e. Structural changes of allantoic membrane epithelium submitted to the action of different agents. *Gallus domesticus (Aves)*

PASTEELS, J. J.M.D., M.I.I.E., Prof. — Lab. d'Anat. et d'Embryol., Fac. de Méd. de l'Université, 97 Rue aux Laines, BRUXELLES, Belgique

PATRICOLO, Miss E. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Enzymatic inhibitors in development. *(Ascidiae)*

b. Cellular aggregation. *(Amphibia)*

PATTEN, B.M. Ph.D., M.I.I.E., Prof. (Emer.) — Dept. of Anat., Med. School, Univ. of Michigan, 4500 East Med. Bldg., ANN ARBOR, Mich., U.S.A.

a. Development of the ventricular myocardium in the embryo, with special reference to the intramural circulation.

PECHÁČKOVÁ, Miss J. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia

a. The development of the venous system. *(Amniota)*

PECK, D. B.S., M.S., Ph.D. — Dept. of Anat., Univ. of Kentucky Med. Center, LEXINGTON, Ky., U.S.A.

PEDERSEN, K.J. Ph.D. — Inst. for almen Zool., Universitetsparken 3, COPENHAGEN Ø, Denmark

PEHLEMANN, F.W. Dr. — Zool. Inst. der Univ., Siesmayerstr. 70, FRANKFURT/Main, Deutsche Bundesrepublik

a. Induktion der adenohypophyse. *Bombina variegata, Rana temporaria (Anura)*

b. Regulationsvermögen der Chordaspitze nach Extirpation im Gastrula — bis Schwanzknospenstadium. *Bombina variegata (Anura)*

PEHRSON, G.T. Dr.Phil., Prof.(Emer.) — Zool. Inst., Univ. of Stockholm, Rådmansgatan 70A, STOCKHOLM, Sweden

a. Development and morphology of the skull and of the lateralis system. *(Teleostei)*

PENER, M.P. Ph.D. — Dept. of Entomol. and Venomous Animals, Hebrew Univ., JERUSALEM, Israel
  a. Development of eggs and its interruption under particular conditions of soil moisture. *Schistocerca gregaria (Arcrididae, Orthoptera)*
  b. Influence of external factors (temperature, humidity) on egg development. *Acrotylus insubricus, Aiolopus thalassinus, Morphacris fasciata sulcata, Oedipoda miniata, O. aurea, O. coerulescens, Locusta migratoria migratorioides, Nomadacris septemfasciata (Acrididae, Orthoptera)* (in collaboration with A.SHULOV)

PENZLIN, H. Dr.rer.nat. — Zool. Inst. der Univ., Universitätsplatz 2, ROSTOCK, Deutsche Demokratische Republik
  a. Physiologie der Regeneration. *Cordylophora caspia (Hydrozoa)*
  b. Physiologie und Histologie der Regeneration. *Blattella* spec., *Periplaneta* spec. *(Orthoptera)*

PERA, L. M.D. — Inst. of Anat. and Histoembryol, Univ. of Pisa, Via Roma 33, PISA, Italia

PERKOWSKA (MOSER), Mrs.E. Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
  a. Types of RNA synthesis in early embryonic tissues. (in collaboration with C. H. WADDINGTON)

PERLES, B. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts.Pères, PARIS VIe, France
  a. Oreille interne. *Homo sapiens (Primates)*

PERLMANN, H. P. Ph.D., M.I.I.E. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

PERRY, Miss M.M. B.Sc. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
  a. Study of certain features of developing embryos by electronmicroscopy. *(Amphibia)* (in collaboration with C.H.WADDINGTON)
  b. Electron microscope studies of mutants. *Drosophila* spp. *(Diptera)* (in collaboration with C.H.WADDINGTON)
  c. Ultrastructural changes during growth. *Micrasterias thomasiana (Desmidoidea, Conjugales)* (in collaboration with C.H.WADDINGTON)

PERTUSA, J. Ph.D. — Inst. Biol. de Sarriá, Dr.Amigant 31, BARCELONA 17, Spain
  a. Studies on morphogenetic movements in the blastoderm. *Gallus domesticus (Aves)*

PETERS, A. B.Sc., Ph.D. — Dept. of Anat., Univ. of Edinburgh, Univ. New Buildings, Teviot Row, EDINBURGH 8, Scotland
  a. Electron microscope study of the formation of myelin sheaths in the central nervous system. *Rattus domesticus (Rodentia)*

PETERS, Mrs.H. M.D. — Finsen Lab., Finsen Inst., Strandboulevarden 49, COPENHAGEN, Denmark
  a. Radiation sensitivity of oocytes. *Mus musculus (Rodentia)* (in collaboration with E.LEVY)
  b. Generation time and turnover time of cells in the vaginal and uterine epithelium. *Mus musculus (Rodentia)* (in collaboration with E.LEVY)
  c. DNA synthesis on oocytes. *Mus musculus (Rodentia)* (in collaboration with E.LEVY and M.CRONE)

d. Cell dynamics of the ovarian cycle: autoradiographic studies of ovaries after flash labelling with a DNA precursor. *Mus musculus (Rodentia)*

PETERS, Th. Dr.Med. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutsche Bundesrepublik

a. Die Wirkung von Röntgenstrahlen auf befruchtete Eizellen und junge Keimstadien unter besonderer Berücksichtigung der Wirkung kleiner Strahlendosen und geringer Schäden. *Triturus alpestris (Urodela)*

PETIT, A. Lic.es Sci. — Lab. de Zool. et d'Embryol. expér., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France

a. Morphogénèse et différenciation du complex pineal. *(Reptilia)* (en collaboration avec J. H. VIVIEN)

PETRUCCI, D. — Ist. di Zool. dell'Univ., Viale Regina Elena 324 (al Policlinico), ROMA, Italia

a. Enzymes and embryonic development. *(Amphibia)*
b. Endogeneous respiration of oocytes. *(Amphibia)*

PETRY, G. Dr.med., Prof. — Anat. Inst. der Univ., Robert Kochstr. 6, MARBURG/Lahn, Deutsche Bundesrepublik

a. Funktionelle Histologie der Eihäute. *(Reptilia; Aves; Mammalia)*
b. Entwicklung von Epithelien.

PFLUGFELDER, O. Dr.rer.nat., Prof. — Zool. Inst. der Landwirtschaftl. Hochschule, STUTTGART-Hohenheim, Deutsche Bundesrepublik

a. Änderung des Stoffwechsels nach Störung des hormonalen Gleichgewichts. *(Insecta)*
b. Einfluss der Pinealektomie auf die Postembryonalentwicklung. *(Teleostei)*
c. Histophysiologie der Corpora allata nach experimenteller Beeinflussung. *(Insecta)*
d. Wirkungsmechanismen von Thyreostatika. *Rana temporaria, Xenopus laevis (Anura), Gallus domesticus (Aves)*

PHILPOTT, G.W. B.S., M.D. — Lab. of Neuroanat.Sci., N.I.N.D.B., Sect. on Exper. Embryol., Natl.Inst. of Health, BETHESDA, MD.20014, U.S.A.

a. Morphogenesis and cellular differentiation of the lens of the vertebrate eye. *Gallus domesticus (Aves)*

PIATIGORSKY, J.P. B.A. — Dept. of Devel.Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif., U.S.A.

a. Protein synthesis in marine embryos. *(Echinodermata)*

PIATT, J. A.B., M.A., Ph.D., M.I.I.E. — Dept. of Anat., School of Med. Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.

PICHERAL, B. Dr.3ème Cycle — Lab. de Biol. Génér., Fac. des Scis., RENNES, France

a. Nuclear transplantation. *(Amphibia)*
b. Spermatogenesis. *(Amphibia)*

PIEAU, Cl. Lic.ès Sci. — Service d'Embryol. expér. de l'Inst. Pasteur, 20 Rue des Moulins, SANNOIS (S. & O.), France

a. Researches upon the mechanisms of sexual differentiation. *Cestudo europaea, Testudo graeca (Chelonia)*

PIERRO, L.J. B.S., M.S., Ph.D., Prof. — Dept. of Anim.Genet., Storrs Agric. Exp. Station, Univ. of Connecticut, STORRS, Conn., U.S.A.

- a. Chemical teratogenesis: inhibitors of nucleic acid and protein metabolism. *Gallus domesticus (Aves)*
- b. Gene interaction in the control of formation of specific melanin granules. *Mus musculus (Rodentia)*
- c. Eye development. *Mus musculus (Rodentia)*
- d. Developmental genetics. *Gallus domesticus (Aves)*

PIETRZYK (WALKNOWSKA), Mrs. J. M.Sc. — Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKOW ,Poland

PIHAN, J.C. Agr.de Sci. — Lab. de Zool. Génér., Fac. des Sci. de Nancy, 30 Rue Ste Cathérine, NANCY, France

- a. Développement du système trachéen chez l'embryon et la larve (étude expérimentale). *Tipula flavolineata (Diptera)* (en collaboration avec Fr. STEPHAN)

PIKÓ, L. Ing.Agr., D.V.M., M.I.I.E. — Dept. of Devel.Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif. U.S.A.

- a. Fine structure and chemistry of fertilization and early development. *(Echinodermata; Rodentia)*

PILLERI, G. Dr.med. — Hirnanat. Inst. der Psychiatr. Univ. Klinik, Med. Fak., Bolligenstr. 117, 3072 Waldau, BERN, Schweiz

- a. Entwicklung des Gehirns. *Castor canadensis (Rodentia)*
- b. Über die Protuberantia sclerae am embryonalen Auge. *Homo sapiens (Primates)*
- c. Ontogenese des Auges. *Balaenoptera physalus, B. acurorostrata, Megaptera novaeangliae, Delphinus delphis, Tursiops truncatus, Delphinapterus leucas (Cetacea)*
- d. Entwicklung der Körperform. *Balaenoptera physalus, B. acutorostrata, Megaptera novaeangliae, Delphinus delphis, Tursiops truncatus, Delphinapterus leucas (Cetacea)*
- c. Ontogenese des Auges. *Balaenoptera physalus, B. acutorostrata, Merostrata, Megaptera nodosa, Delphinus delphis, Tursiops truncatus, Delphinapterus leucas (Cetacea)*
- f. Ontogenesis (especially nervous system). *Globicephala melaena (Odontoceti, Cetacea)*

PIMPINELLI, G. Dott. — Ist. di Biol. gener., Fac. di Med., Via del Giochetto, PERUGIA, Italia

- a. Variazioni dell'attività catalasica in relazione alla presenza o meno di alcuni fattori contenuti nel sangue.

PINAMONTI, S. Dr.Biol.Sci. — Ist. di Istol. ed Embriol., Fac. di Sci., Univ. di Perugia, PERUGIA, Italia

- a. Metabolism of tryptophane, synthesis of ommochromes, *Schistocerca gregaria (Orthoptera)*

PINEAU, H. — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts.Pères, PARIS VIe, France

- a. Croissance prénatale globale. *Homo sapiens (Primates)*

PINET, J.-M. D.E.S. — Inst. Natl. Agronomique, Lab. de Zool., 16 Rue Claude Bernard, PARIS Ve, France

- a. Structure of the cellular bud which secretes the stylet at each moult, and study of its development. *Rhodnius prolixus (Reduviidae, Heteroptera)*

b. Abdominal transplantation of the bud which secretes the stylet for the study of the determinism of coaptations. *Rhodnius prolixus (Reduviidae, Heteroptera)*

PINOT, Miss M. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Etude de la croissance et de la différenciation du bourgeon de membre in vitro. *Gallus gallus (Aves)*
b. Effets des rayons X et de l'ypérite sur les composants ectodermiques et mésodermiques du bourgeon de membre. *Gallus gallus (Aves)*

PLEEGING, J.H. Med.Drs. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands

a. Topographical relationships in the intestines during ontogenesis. *Mus musculus albinus (Rodentia)*
b. Development of the glomus chorioideum. *Homo sapiens (Primates)*

PLESNER, P. Cand.med. — Biol. Inst. of the Carlsberg Foundation, 16 Tagensvej, COPENHAGEN N, Denmark

PLETICHA, P. RNDr. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia

a. Ontogeny of the air sacs. *Larus ridibundus, Fulica atra, Turdus merula, Ciconia alba, Ardea cinerea (Aves)*

POHL, Miss V. A. Lic.en Sci.Zool. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

POHLEY, H.J. Dr., Prof. — Inst. für Entw.physiol., Univ. zu Köln, Gyrhofstr. 17, KÖLN-Lindenthal, Deutsche Bundesrepublik

a. Theoretische und experimentelle Untersuchungen über 1) Regeneration und Häutung, 2) Regulation des Zellteilungswachstums. *Ephestia kühniella (Lepidoptera), Periplaneta americana (Orthoptera)*
b. Modelldarstellung entwicklungsphysiologischer Systeme mit Hilfe von programmgesteuerten Rechenanlagen.

POLEZHAEV, L.V. Dr.biol.sci., M.I.I.E., Prof. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Regeneration of cranium bones. *Mus domesticus, Rattus norvegicus, Oryctolagus cuniculus, Felis domestica, Canis familiaris (Mammalia)*
b. Regeneration of dental tissue. *Canis familiaris (Carnivora)*
c. Regeneration of myocardium. *Rattus norvegicus, Oryctolagus cuniculus, Felis domestica (Mammalia)*
d. Restoration of regeneration capacity of limbs after X-irradiation. *Ambystoma mexicanum (Urodela)*
e. Regeneration of the brain. *Felis domestica, Canis familiaris, Rattus norvegicus (Mammalia)*

POLTEVA, Mrs.D.G. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.

a. Comparative study of the processes of regeneration and somatic embryogenesis. *Actinia equina, Metridium senile fimbriatum, Anthopleura kuroganè (Hexacorallia)*

PONTIER, J. Lic.ès Sci. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Analyse factorielle appliquée à l'étude de la morphogenèse. *Myzus persicae (Aphididae, Rhynchota)*

POPOV, V.V. Dr., Prof. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

a. Developmental physiology of the sense organs, and the significance of irritability for the evolution of morphogenesis.
b. Significance of the morphogenetic properties of the layers of the retina for the development of the dioptric system of the eye.
c. The relationship of cellular and subcellular components in cornea induction. *(Anura)*

POPP, R.A. Ph.D. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.

a. Ontogeny of variant forms of esterases in tissues; qualitative and quantitative characteristics of allelic forms of esterases studied by starch and/or acrylamide gel electrophoresis. *Mus musculus (Rodentia)*

PORTER, K. R. M.I.I.E. — Biol. Labs., Harvard Univ., 16 Divinity Ave., CAMBRIDGE, Mass. 02138, U.S.A.

PORTMANN, A. Dr.Phil., Prof. — Zool. Anstalt der Univ. Rheinsprung 9,4000 BASEL, Schweiz

a. Embryology. *(Opisthobranchia, Prosobranchia, Gastropoda; Aves; Mammalia)*
b. Morphological analysis of early postembryonic development. *(Rodentia; Insectivora)*

POTEMKINA, Mrs. D.A. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

a. Causal analysis of the formation of the Müllerian ducts, in particular the interactions between nephric system and gonadal ducts. *(Anura)*
b. The formative connections between the epithelial and mucosal components of the oviduct and the connective tissue stroma. *(Anura)*
c. The problem of the reduction of the Müllerian ducts of juvenile males. *Pelobates fuscus (Anura)*

POTTER, I.C. — Dept. of Zool., School of Biol. Sci., Univ. of New South Wales, P.O.Box 1, KENSINGTON, N.S.W., Australia

a. Culture of larval hearts. *Mordacia mordax (Cyclostomata)*

POTTS, D.M. M.A., M.B., B.Chir. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

a. Implantation and gestation. *(Mammalia)*

POULSON, D.F. B.S., Ph.D., M.I.I.E., Prof. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, Conn.06520, U.S.A.

a. Mid-gut: genesis and differentiation. *Drosophila melanogaster (Diptera)*
b. Chromosomal control of differentiation. *Drosophila melanogaster (Diptera)*
c. Neurogenesis in normal and genetically deficient embryos. *Drosophila melanogaster (Diptera)*
d. Maternally inherited sex-ratio disturbances of development. *Drosophila melanogaster, D. bifasciata, D. willistoni (Diptera)*
e. Developmental genetics. *Drosophila nebulosa (Diptera)*

POURREAU (SCHNEIDER), Mrs.N.M. B.A., Dr. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
a. Culture in vitro of adult chick organs as a medium for the proliferation of cancers from another species.
b. In vitro studies on hematopoïesis in embryonic and adult spleen and bone marrow. *(Aves; Mammalia)*

POURTOIS, M. M.D., Lic.en Sci.dent. — Lab. d'Anat. et d'Embryol, Fac. de Méd. de l'Univ., 97 Rue aux Laines, BRUXELLES-Auderghem, Belgique

PRASAD, M.R.N. M.Sc., Ph.D., Prof. — Dept. of Zool., Univ. of Delhi, DELHI 7, India
a. Delayed implantation studies. *Cricetus auratus, Rattus* spec. *(Rodentia)*
b. Morphogenesis and cytochemistry of foetal membranes. *Funambulus* spec., *Tatera indica cuvierii (Rodentia)*
c. Physiology of reproduction. *Hemidactylus* spec. *(Lacertilia), Funambulus* spec. *(Rodentia), Pteropus* spec. *(Megachiroptera), Loris* spec. *(Primates)*

PRAY, T.R. B.A., Ph.D., Prof. — Dept. of Biol., Univ. of Southern California, University Park, LOS ANGELES, Calif.90007, U.S.A.
a. Development of the gametophytes and juvenile stages of the sporophytes. *(Cheilantheae, Pteridaceae)*
b. Development of the vein systems of leaves. *Anemia* spec., *Marsilea* spec., *Cyrtomium* spec., *Acrostichum* spec. and other spp. *(Pterydophyta)*
c. Development of the dichotomous venation of the leaf. *Ginko* spec.

PREDA, V. M.D., Prof. — Catedra de Biol., Inst. Medico-Farmaceutic, Str. Pasteur 6, CLUJ, Rumania
a. Influence de la température d'incubation sur le métabolisme de l'oeuf. *Gallus* spec. *(Aves)*
b. Histochimie des organes embryonnaires cultivés in vitro. *Gallus* spec. *(Aves)*
c. Influence de l'hormone gonadotrope choriale sur la gonade indifférenciée cultivée in vitro. *Gallus* spec. *(Aves)*

PRESCOTT, D.M. B.A., Ph.D., Prof. — Dept. of Biol., Univ. of Colorado, BOULDER, Colo., U.S.A.
a. Nuclear-cytoplasmic interactions studied by RNA migration, histone turnover and localization of nonhistone protein turnover exchange. *Amoeba proteus (Amoebina)*
b. Subunit organization of chromosomes revealed by nonrandom exchange (exchange spots) of sister chromatids. *Microcricetus auratus (Rodentia)*
c. Initiation and localization of DNA synthesis in relation to amino acids, nucleosides and nucleokinases. *Tetrahymena pyriformis, Euplotes eurystomatus (Ciliata)*

PRESLEY, R.S. M.A., M.B., B.Chir. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England
a. Tissue culture and organogenesis. *(Mammalia)*

PRESS, N. B.S., M.S., Ph.D., Prof. — Dept. of Zool., Univ. of Wisconsin-Milwaukee, MILWAUKEE, Wis.53211, U.S.A.

a. Transfer of macromolecules from follicle cells to developing oocytes. *(Aves)*

PRESTIGE, M.C. M.A. — Dept. of Zool., Univ. of Bristol, BRISTOL 8, England

a. Embryology of the nervous system, growth and metamorphosis. *(Anura)*

PRETO PARVIS, Mrs.V. Dott.Med., Prof. — Ist. di Istol. ed Embriol. gener., Fac. di Med. e Chir. dell'Univ. di Milano, Via Ponzio 7, MILANO, Italia

PRICE, Miss D. M.I.I.E., Prof. — Dept. of Zool., Biol. Sci. Div. Univ. of Chicago, CHICAGO 37, Ill., U.S.A.

PRITCHARD, E.T. M.Sc., Ph.D., Prof. — Univ. of Manitoba, WINNIPEG, Manitoba, Canada

a. Disposition of linoleic-1-C^{14} acid in brain in vivo during early growth and development. *Rattus norvegicus (Rodentia)*

b. Cholesterol esterase activity in developing brain. *Rattus norvegicus (Rodentia)*

PROPPER, A. Lic.es Sci. — Lab. de Zool., Inst. des Sci.Nat., Place Maréchal Leclerc, BESANÇON, France

a. Organogenèse de la grande mammaire. *Oryctolagus cuniculus (Lagomorpha)* (en collaboration avec L.GOMOT)

PROVENZANO, A.J. A.B., M.S., Ph.D. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, MIAMI, Fla.33149, U.S.A.

a. External morphology of larval stages with consideration for the development of taxonomic characters. *(Decapoda,* part. *Paguridae, Anomura, Crustacea)*

b. Effects of some environmental factors on larval development. *(Anomura, Decapoda, Crustacea)*

PRUDHOMME, J.C. Lic.ès Sci. — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Culture d'organes in vitro. *Bombyx mori (Lepidoptera)*

PUCCI (MINAFRA), Mrs.I. Dr.Sc. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. Ultrastructure of eggs. *(Mollusca)*

b. Cytochromoxidase in development. *(Ascidiae)*

PUCCINELLI, Mrs.I. Dr.Nat.Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia

a. Development and cytology. *(Tricladidea, Turbellaria; Hirudinea, Annelida)*

PUZANOVA, Mrs.L. MUDR., C.Sc. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia

a. Development of the internal structure of muscles. *Rattus albus (Rodentia), Homo sapiens (Primates)*

QUAGLIA, A. Dr.Nat.Sci. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia

a. Submicroscopic histology of endocrine glands during metamorphosis. *(Anura)*

QUERNER, H. Dr.rer.nat., Prof. — Inst. f. exp. Krebsforsch., Univ. Heidelberg, Voss-Str. 3, HEIDELBERG, Deutsche Bundesrepublik

a. Hormonphysiologische Untersuchungen. *(Cyprinodontidae, Teleostei)*

b. Einfluss von Bestrahlung auf Entwicklung und Wachstum. *(Ophryotrocha, Annelida)*

QUERNER (DETERING), Mrs.W. Dr.rer.nat. — Abt.f.Entw.physiol.der Haustiere, Max-Planck-Inst.f.Tierzucht u.Tierernährung, 3051 MARIENSEE, Deutsche Bundesrepublik

a. Development of eye discs in vitro. *Drosophila melanogaster (Diptera)*

QUERTIER, Miss J.A. Lic.Sci.Zool. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

a. Groupements thiols et disulfures dans la morphogénèse. *(Amphibia)*

b. Etude autoradiographique des effets des thiols et des disulfures sur le métabolism des acides nucléiques et des protéines. *Pleurodeles* spec. *(Urodela)*

c. Métabolisme des acides nucléiques dans les hybrides. *Paracentrotus* spec., *Arbacia* spec. *(Echinoidea)*, *Bufo* spec., *Rana* spec. *(Anura)*

QUEVEDO, W.C., Jr. B.S., M.S., Ph.D., Prof. — Dept. of Biol., Brown Univ., PROVIDENCE, R.I.02912, U.S.A.

a. The regulation of melanocyte function and reproduction within normal and irradiated skin. *Mus musculus (Rodentia)*

QUINTINO ROGADO — Lab. d'Anat., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Système des azygos. *Homo sapiens (Primates)*

RABAEY, M. M.D., Prof. — Ophthalmol. Clinic, Univ. Hosp., De Pintelaan, GENT, Belgium

a. Proteins in the developing lens. *Mesocricetus auratus (Rodentia)*

RACCAUD (SCHOELLER), Mrs.J. Dr.ès Sci. — Lab. de Physiol. des Insectes, Fac. des Sci., 7 Quai St. Bernard, PARIS Ve, France

a. Analyse expérimentale de la céphalogenèse larvaire et imaginale. *Calliphora* spec. *(Diptera)*

RADECKA, Mrs. E. ERDMAN D.Sc. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland

a. The morphogenetic functions of the thyroid gland and hypophysis. *(Amphibia; Reptilia; Aves)*

b. Gametogenesis (cytology and cytochemistry). *Tachycines asynamorus (Orthoptera)*

RADZIKOWSKI, St. Mgr. of Sci. — Inst. of Zool., Warsaw Univ., WARSZAWA 64, Poland

a. Changes of pattern of ciliature after cell division and conjugation; contrast phase microscopy, dry silver impregnation. *Chilodonella cucullulus (Holotricha, Ciliata)*

RADZINSKAJA, Miss L.I. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Developmental biochemistry and physiology (respiration, blood pigments, action of respiratory inhibitors). *Misgurnus fossilis, Salmo salar (Teleostei)*, *Acipenser güldenstädti (Chondrostei)*, *(Amphibia)*

RAEKALLIO, J. M.D., F.R.M.S., Prof. — Dept. of Forensic Med., Univ. of Turku, Kiinamyllynkatu 10, TURKU 3, Finland

a. Histochemical studies on enzyme activities in experimental wound healing. *Rattus* spec., *Cavia* spec. *(Rodentia)*

RAFFERTY, K.A., Jr. B.S., M.S., Ph.D. — Dept. of Anat., School of Med., Johns Hopkins Univ., 709 N.Wolfe St. BALTIMORE, Md. 21205, U.S.A.
- a. Developmental pathology. *Rana pipiens (Anura)*
- b. Morphology of cells in culture. *Rana pipiens, R. sylvatica, R. clamitans (Anura)*

RAGOZINA, Mrs.M.N. Dr.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
- a. The influence of ecological factors on the mode of development of provisory organs. *Lacerta* spp., *Gecko* spp., *Agama* spp., *Testudo* spp., *Clemmys* spp. *(Reptilia), (Aves nidifugi et nidicoli)*

RAMASWAMI, L.S. M.Sc., D.Sc., Prof. — Dept. of Zool., Univ. of Rajasthan, JAIPUR, India
- a. Induced spawning and artificial hybridization of Indian species. *(Teleostei; Ranidae, Bufonidae, Anura)*
- b. Reproductive physiology of desert animals.
  1. Influence of hormones on early development. *Meriones hurrianae (Zapodidae, Rodentia), Hemiechinus* spec., *Paraechinus* spec. *(Erinaceoidea, Insectivora)*
  2. Neurosecretion during development and metamorphosis. *(Anura)*

RAMENSKAJA, Mrs. G. P. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St.12, MOSCOW V-133, U.S.S.R.

RAMSEY, Miss E.M. A.B., M.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
- a. Placentation; study of placental structure, development and vasculature. *Macaca mulatta, Homo sapiens (Primates)*
- b. Determinations of blood, amniotic and intervillous space pressures throughout pregnancy. *Macaca mulatta (Primates)* (in collaboration with G.W.CORNER, Jr.)
- c. Anatomical and radiological studies of circulation in the maternal placenta. *Macaca mulatta, Homo sapiens (Primates)* (in collaboration with M.W.DONNER, C.B.MARTIN, Jr., I.H.KAISER and H.S.McGAUGHEY, Jr.)

RANZI, S. Ph.D., M.I.I.E., Prof. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italia
- a. Action of RNA on cytodifferentiation.

RANZOLI, F. Dr., Prof. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
- a. Development of gonads. *(Urodela; Aves)*
- b. Sexual and asexual reproductive cycles and regeneration. *Salmacina incrustans, S. dysteri (Polychaeta)*
- c. Growth and sexuality in colonial animals. *(Bryozoa)*

RAO, B.R. M.Sc. — Hubrecht Lab. (Intern.Embryol.Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands
- a. Establishment of the pattern of neural differentiation tendencies in the presumptive neural ectoderm in definitive primitive streak and early head process stages (method: intracoelomic grafting of ectoderm from various areas). *Gallus domesticus (Aves)*

RAO, K.V. M.Sc. — Dept. of Zool., Univ. of Poona, Ganeshkind, POONA 7, India

a. A study of the role of ribonucleic acids in morphogenesis and neural induction, using RNA-base analogues. *Gallus domesticus (Aves)*
b. Study of morphogenesis, using inhibitors of protein synthesis. *Gallus domesticus (Aves)*
c. A study of the synthesis of nucleic acids and proteins in early development, using various metabolic inhibitors. *Planorbis exustus (Pulmonata, Gastropoda)*

RAO, S. R. V. M.Sc., Ph.D. — Dept. of Zool., Univ. of Delhi, DELHI 7, India

a. Cytology and cytochemistry of developing oocytes. *(Tunicata)*
b. Studies on the nuclear sex in embryos. *(Mammalia)*

RAPOLA, M. H. J. M.D. — Dept. of Anat., Univ. of Helsinki, HELSINKI, Finland

RAPPAPORT, R.,Jr. B.S., M.S., Ph.D., Prof. — Dept. of Biol., Union Coll., SCHENECTADY, N.Y. 12308, U.S.A.

a. Role of water in growth and morphogenesis. *Rana pipiens (Anura)*
b. Early embryology. *Marinogammarus obtusatus (Gammaridae, Crustacea)*
c. Comparative micrurgical studies on cytokinesis: extending present methods to a variety of experimental material and devising new forms of physical experimentation. *Marinogammarus obtusatus (Gammaridae, Crustacea), Echinarachnius parma (Echinoidea), Rana pipiens (Anura)*

RASMONT, R. Dr. — Lab. de Zool., Fac. des Sci., Univ. libre de Bruxelles, 50 Avenue F. D. Roosevelt, BRUXELLES, Belgique

RASMUSSEN, L. Cand.mag. — Biol. Inst. of the Carlsberg Foundation, 16 Tagensvej, COPENHAGEN N, Denmark

RAUNICH, L. Ph.D., M.D., M.I.I.E. Prof. — Ist. di Anat. Comp., Univ. di Ferrara, Via delle Scienze 17, FERRARA, Italia

a. Development of blood cells. *(Vertebrata)*
b. Neural crest development. *(Amphibia)*
c. Hemoglobins (electrophoretic pattern) during development and metamorphosis. *Lepomis* spec., *Ameiurus* spec. *(Teleostei), Bufo vulgaris (Anura), Gallus gallus (Aves)*

RAVEN, Chr. P. Dr.Sc., M.I.I.E., F.R.A., Prof. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a. Maturation divisions of eggs. Various spp. *(Gastropoda)*
b. Application of information theory to oogenesis and embryonic development.
c. Morphology of the head region in cyclocephalic embryos. *Limnaea stagnalis (Gastropoda)*

RAWLES (SPURBECK), Mrs.M.E. Ph.D., M.I.I.E. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.

a. The origin and development of regional specialization in the integumentary system. *Gallus gallus (Aves)*

RAWLS, J. M. B.S., M.A., Ph.D., Prof. — Dept. of Biol., Lamar State Coll. of Technol., BEAUMONT, Tex., U.S.A.

RAY, A.K. M.Sc. — Cell Research Unit, Dept. of Zool., Univ. Coll. of Sci. and Technol., 35, Ballygunje Circular Road, CALCUTTA 19, India

a. The effect of lithium chloride on the competence of presumptive epidermis. *Ambystoma mexicanum (Urodela)*
b. Normal table. *Bufo melanostictus (Anura)*
c. Descriptive and experimental analysis of the development of the vertebral column. *Bufo melanostictus (Anura)*

RAYBININA, Miss Z.A. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.

a. Study of cytological and histochemical mechanisms of regenerating liver. *Mus musculus, Rattus norvegicus (Rodentia)*

RAYCHOWDHURI, S. M.Sc. — Cell Research Unit, Dept. of Zool., Univ. of Calcutta, 35, Ballygunje Circular Road, CALCUTTA 19, India

a. Development of the vertebral column. *Tilapia mossambica (Teleostei)*

RAYNAUD, A. Dr.ès Sci., M.I.I.E. — Service d'Embryol. expér. de l'Inst. Pasteur, 20 Rue des Moulins, SANNOIS (S. & O.), France

a. Etude du développement normal du tractus génital chez l'embryon. *Anguis fragilis (Lacertilia)*
b. Effets de la destruction au moyen des rayons X, des ébauches hypophysaires. *Anguis fragilis (Lacertilia)*
c. Etude de l'orientation de l'axe de symétrie embryonnaire et des raports existant entre cette orientation et la rotation des oeufs dans l'utérus. *Anguis fragilis (Lacertilia)*
d. Researches on the formation and the regression of the limb buds. *Anguis fragilis (Lacertilia)*
e. Histogenesis of the adrenal gland. *Anguis fragilis (Lacertilia)*
f. Decapitation of the embryo. *Anguis fragilis (Lacertilia)*
g. Effects of sexual hormones on the sexual differentiation of the embryo. *Anguis fragilis, Lacerta viridis (Lacertilia)*
h. Researches on the capacities of differentiation in vitro of anlagen of the genital tract. *Anguis fragilis (Lacertilia)*

RAYNAUD (CHAULIN-SERVINIERE), Mrs.J. Dr.ès Sci. — Service d'Embryol. expér. de l'Inst. Pasteur, 20 Rue des Moulins, SANNOIS (S. & O.), France

a. Histochemical researches on the functional differentiation of the endocrine glands in the embryo. *Anguis fragilis (Lacertilia)*

REAMS, W.M., Jr. B.S., Ph.D., Prof. — Dept. of Biol., Univ. of Richmond, RICHMOND, Va., U.S.A.

a. Effects of tissue environment on pigment cell morphogenesis. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
b. Factors affecting pigment cell behaviour in the skin. *Gallus domesticus (Aves), Mus musculus (Rodentia)*
c. Microchemical analysis of myogenesis and mysial differentiation. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

REGGI, L.M.de — Lab. de Zool. expér., Fac. des Sci. de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France

a. Variations morphologiques et physiologiques dans le développement, sous l'action de divers facteurs. *(Phytophthires, Rhynchota)*

REGONDAUD, J. Lic.ès Sci. — Lab. de Zool. et Biol. anim., Fac. des Sci., POITIERS, Vienne, France

REINIŠ, S. MUDr., C.Sc. — Inst. of Pathophysiol., Med. Fac., Charles Univ., Lidická 1, PLZEŇ, Czechoslovakia

a. Morphology of the development of the normal and damaged CNS. *Rattus norvegicus (Rodentia)*

REMBOLD, H. Dr.rer.nat., Dipl.-Chem. — Max-Planck-Inst. für Biochem., Goethestrasse 31, 8 MÜNCHEN 15, Deutsche Bundesrepublik

a. Isolation of the determining principle from royal jelly, responsible for queen establishment. *Apis mellifica (Hymenoptera)*

REMOTTI, E. Prof. — Ist. di Anat. e Fisiol. comp. dell'Univ., Via Balbi 5, GENOVA, Italia

RENNELS, E.G. Ph.D., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.

a. The effect of benzpyrene feeding on reproduction; gross malformations. *Mus norvegicus albinus (Rodentia)*

REPORTER, M.C. Ph.D. — Charles F. Kettering Research Labs, 150 E. South College Street, YELLOW SPRINGS, Ohio 45387, U.S.A.

a. Metabolic characteristics of the early embryo. *Gallus domesticus (Aves)*

b. Energy transfer processes in the early embryo and in monolayer cultures. *Gallus domesticus (Aves)*

c. Energy transfer processes in the early embryo. *Arbacia punctulata (Echinoidea)*

REVERBERI, G. Dr., M.I.I.E., Prof. — Ist. di Zool., Via Archirafi 18, PALERMO, Italia

a. The role of some enzymes in embryonic development. (marine *Invertebrata)*

b. Free amino acids in embryonic development.

c. Analysis of eggs by electron microscopy. (marine *Invertebrata)*

RÉVESZ-FERENCZY, Mrs.E. M.D. — Dept. of Anat., Univ. of Bern, 26 Buehlstr., 3012 BERN, Switserland

a. Radiobiology, normal embryology. *Homo sapiens (Primates)*

b. Radiobiology, experimental embryology. 1. genetics 2. placentology. *Mesocricetus auratus (Rodentia)*

REYER, R.W. B.A., M.A., Ph.D., M.I.I.E., Prof . — Dept. of Anat., School of Med., Med. Center, West Virginia Univ., MORGANTOWN, W. Va.26506, U.S.A.

a. An experimental analysis of lens regeneration: a study of the causal mechanisms involved in lens regeneration from the dorsal iris and their relation to the processes of lens induction in the embryo. *Triturus viridescens, Ambystoma punctatum (Urodela)* (in collaboration with L.S. STONE, New Haven, Conn.)

b. A study of the coordinate induction systems operating in the development of the embryonic lens. *Triturus viridescens, Ambystoma punctatum, A. mexicanum (Urodela)*

c. Studies on DNA synthesis, cell division and cell migration during lens and neural retina regeneration using thymidine-H^3. *Triturus virides cens (Urodela)*

REYNAUD, G.R. Lic.ès Sci. — Lab. de Biol. Anim. du C.P.E.M.1, Fac. des Scis., 1, place Victor-Hugo, MARSEILLE III, France

a. Recherches expérimentales sur la lignée germinale. *Gallus* spec. *(Aves)*

REYNOLDS, S.R.M. A.B., M.A., Ph.D., D.Sc.(hon.), Dr.hon.causa (Univ.Catol. de Chile), Prof.hon.causa (Fac. de Med., Montevideo) — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W. Polk St., CHICAGO 12, Ill., U.S.A.

a. Fetal vascular physiology. *Homo sapiens, Lepus* spec., *Ovis* spec. *(Mammalia)*
b. Uterine contraction patterns. *Homo sapiens (Primates)*
c. Pulmonary vasculature, fetal and neonatal condition. *Cavia* spec. *(Rodentia), Ovis* spec. *(Artiodactyla)*
d. Architecture of umbilical blood vessels, distended and nondistended. *Homo sapiens (Primates)*
e. Development of chemoreceptor function. *Ovis* spec. *(Artiodactyla)*
f. Sensory input and homeostasis related to fetal adaptation to intrauterine environment. *Ovis* spec. *(Artiodactyla)*
g. Effect of psychobiological stress and ageing on fertility. *Rattus rattus (Rodentia)*
h. Placentogenesis. *Macaca mulatta, Homo sapiens (Primates)*

REYNOLDS (KING), Mrs. W.A. B.S., M.S., Ph.D. — Dept. of Anat., Univ. of Illinois Med. Center, CHICAGO, Ill., U.S.A.

a. The nature of amphibian metamorphosis (effects of low temperatures on glands controlling the process, localization of thyroxine in tissues, histochemistry of pituitary, analysis of factors controlling differentiation of motor neurons). *Rana pipiens (Anura)*

REYSS-BRION (DUCREAU), Mrs.M. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Influence des rayons X sur le développement embryonnaire. *Pleurodeles waltlii (Urodela), Gallus* spec. *(Aves)*
b. Influence des rayons X sur le pouvoir inducteur de la gastrula. *Pleurodeles waltlii (Urodela)*

RHODES, R.H. B.S., M.S., Ph.D., Prof. — Dept. of Biol.Sci., Fairleigh Dickinson Univ., TEANECK, N.J., U.S.A.

a. Histochemical studies involving RNA and alkaline phosphatase in developing pituitaries associated with the onset of secretion. *Rana pipiens (Anura). Ambystoma maculatum, Siredon mexicanum (Urodela)*

RICHTER, K. M. Prof. — Dept. of Anat., School of Med., Univ. of Oklahoma, 801 N.E. 13th St., OKLAHOMA CITY, Okla., U.S.A.

RICHTER, R.H.H. Ph.D. — Univ.-Frauenklinik, Schanzeneckstr. 1, BERN, Schweiz

a. Effect of various substances and environmental conditions on embryonic and fetal development. *Rattus* spec. *(Rodentia)*
b. Relationship between chemical structure and biological effect of steroids. *Rattus* spec. *(Rodentia)*

RICKENBACHER, J. Dr.med., Prof. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH, Schweiz

a. Viruswirkung auf Embryonen unter Heranziehung der Explantationsmethode mit ganzen Organen. *(Vertebrata), Homo sapiens (Primates)* (in Zusammenarbeit mit G.TÖNDURY)
b. Biochemische Untersuchungen über den Einfluss der Steroide auf die Entwicklung. *Triton alpestris (Urodela), Gallus domesticus (Aves), Mus musculus (Rodentia)*

RIECK, A.F. B.S., M.S., Ph.D., Prof. — Dept. of Physiol., Marquette Univ., School of Med., 561 N. 15th Street, MILWAUKEE, Wis. 53233, U.S.A.
a. Photobiological studies on early cleavage. *Echinarachnius parma (Echinoidea)*
b. Cell renewal and differentiation in epidermis. *Mus musculus (Rodentia)*
c. Inhibiting influences on forelimb regeneration. *Triturus viridescens (Urodela)*

RIEGERT, P. W. B.A., M.Sc., Ph.D. — Research station, Research Branch, Canada Agricult., Univ. Sub Post Office, SASKATOON, Sask., Canada
a. Inheritance of diapause; duration, development and termination in relation to temperature and light. *Melanoplus bilituratus, M. packardii, M. dawsoni (Acrididae, Orthoptera)*
b. Embryogenesis and growth. *Melanoplus packardii, M. dawsoni (Acrididae, Orthoptera)*

RINALDI, Miss L. Dr.Biol. — Ist. di Zool. e Anat. comp., Univ. di Parma, PARMA, Italia
a. Experimental morphology of bone induction and inhibitory action of thalidomide. (in collaboration with B.SCHREIBER)

RINALDINI, L. M. Ph.D., Prof. — Dept. of Microbiol., School of Med., New York Univ., NEW YORK, N.Y., U.S.A.

RISLEY, P.L. A.B., M.S., Ph.D., Prof. — Dept. of Biol., Univ. of Oregon, EUGENE, Ore., U.S.A.
a. Histophysiology of male reproductive organs. *(Vertebrata)*
b. Cytodifferentiation and histogenesis of sex organs. *(Vertebrata)*

RIZZOLI, C. Dott., Prof. — Inst. of Histol. and Gener. Embryol., Univ. of Bologna, Via Belmeloro 8, BOLOGNA, Italia
a. Differentiation in vitro of explants of embryonic tissues.

ROBERTS (MONTGOMERY), Mrs. C. B.Sc., M.Sc., Ph.D. — Dept. of Pharmacol., School of Med., Univ. of Southern California, LOS ANGELES, Calif., U.S.A.

ROBERTS, L.W. B.A., M.A., Ph.D., Prof. — Dept. of Biol. Sci., Univ. of Idaho, MOSCOW, Idaho 83844, U.S.A.
a. Experimental induction of wound vessel member differentiation. *Coleus blumeni (Labiatae)*
b. Histochemical localization of enzymes during wound vessel member differentiation. *Coleus blumeni (Labiatae)*
c. Morphogenesis and histochemistry in tissue culture; secondary phloem from taproot. *Daucus carota (Umbelliferae)*
d. Histochemistry of bud morphogenesis in tissue culture; vascular stem explants. *Nicotiana tabacum (Solanaceae)* (in collaboration with Mrs. J. L. GISSLER (RIEMAN))

ROBERTSON, B. M.L. — Dept. of Pediatric Pathol., Karolinska Hosp., STOCKHOLM 60, Sweden
  a. The pathology and anatomy of intrapulmonary vascular anastomoses in congenital heart malformations, particularly transposition of the great arteries. *Homo sapiens (Primates)*

ROBERTSON (PATON), Mrs. E. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
  a. Development of imaginal buds. *Drosophila* spec. *(Diptera)* (in collaboration with C.H.WADDINGTON)

ROBERTSON (HISLOP), Mrs. F.M. B.Sc., Ph.D. — Dept. of Physiol., Univ. of Aberdeen, ABERDEEN, Scotland
  a. The effect of organ-specific antisera on development. *Rattus norvegicus (Rodentia)*

ROBERTSON, G. G. B.A., B.Sc., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Med. Units, Fac. of Basic Med. Sci., Univ. of Tennessee, 62 South Dunlap, MEMPHIS, Tenn. 38103, U.S.A.

ROBERTSON, P.B. B.S., M.S. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, MIAMI, Fla. 33149, U.S.A.
  a. The larval development of some forms of the Western Atlantic, with emphasis on morphology of larvae reared in the laboratory. *Palinurus argus, Palinurus guttatus (Palinuridea), Scyllarides aequinoctialis, Scyllarus americanus (Scyllaridea, Decapoda, Crustacea)*

ROCKSTEIN, M. A.B., M.A., Ph.D., Prof. — Dept. of Physiol., Med. Research Building, Miami Univ., 1600 N.W. 10th Ave., MIAMI, Fla. 33136, U.S.A.
  a. Physiological basis of aging, growth and metamorphosis. *Musca domestica (Diptera)* (in collaboration with Miss P.L.BHATNAGAR)
  b. Metachemogenesis — post-emergence biochemical maturation. *(Holometabola, Insecta)*
  c. Hereditary vs. environmental factors in longevity. *(Diptera, Hymenoptera)*
  d. Effects of X-irradiation on development, aging and longevity. *Musca domestica (Diptera)* (in collaboration with Miss P.L.BHATNAGAR)

ROGERS, K. T. Ph.D., M.I.I.E. — Dept. of Anat., School of Med., Univ. of California, SAN FRANCISCO, Calif. 94122, U.S.A.

ROGULSKA, Miss T. M.Sc. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmieście 26/28, WARSZAWA 64, Poland
  a. Origin and fate of primordial germ cells. *Gallus domesticus, Anas platyrhynchos domestica (Aves)*

ROGUSKI, H. F. D.M. — Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKÓW, Poland

ROLLHÄUSER, H. Dr.med., Prof. — Anat. Inst., Justus-Liebig-Univ., Friedrichstr. 24, GIESSEN, Deutsche Bundesrepublik
  a. Pre- and postnatal development of phenol red excreting capacity of the proximal renal tubules in relation to ultrastructural tubule cell differentiation (vital staining, freeze-drying method, electron microscopy). *Mus rattus (Rodentia)*

ROLLHÄUSER (TER HORST), Mrs. J.O.B. Dr.rer.nat. — Anat. Inst., Justus-Liebig-Univ., Friedrichstr. 24, GIESSEN, Deutsche Bundesrepublik
(no embryological work in progress)

ROMANOFF, A.L. B.S., M.S., Ph.D., Prof.(Emer.) — Lab. of Chem. Embryol., Cornell Univ., c/o Rice Hall 105, ITHACA, N.Y., U.S.A.
a. Chemical embryology. *(Aves)*
b. Developmental pathology. *(Aves)*

ROMANOVSKÝ, A. RNDr., CSc. — Dept. of Gener. and Exp. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia
a. Serological and electrophoretic study of proteins in embryogenesis. *(Amphibia)*
b. Nucleo-cytoplasmic relations in early development. *(Amphibia)* (in collaboration with F. SLÁDEČEK)

ROMIJN, C. Dr., Prof. — Lab. for Veter. Physiol., State Univ. of Utrecht, Alexander Numankade 93, UTRECHT, Netherlands

RONCORONI, G. Dott.Med., Prof. — Ist. di Istol. ed Embriol. gener., Fac. di Med. e Chir. dell'Univ. di Milano, Via Ponzio 7, MILANO, Italia

ROOFE, P. G. Ph.D., Prof. — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas 66045, U.S.A.

ROOSEN-RUNGE, E.C. M.D., Prof. — Dept. of Biol. Structure, School of Med., Univ. of Washington, SEATTLE 5, Wash., U.S.A.
a. Spermatogenesis, development of male gonad, comparative morphology. *Rattus norvegicus (Rodentia), Homo sapiens (Primates)*
b. Regeneration of gonads. *Phialidium* spec. *(Leptomedusae, Hydrozoa)*

ROSE, S.M. B.A., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Tulane Univ., NEW ORLEANS 18, La., U.S.A.
a. A study of the nature of the job-assignment-messages during cellular differentiation and the system by which the messages are transmitted.
b. The reasons behind the difference that some parts of some organisms regenerate and others do not.

ROSENGREN, B.W. Fil.kand. — Wenner-Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden
a. Regulation of protein synthesis in cells cultured in vitro.
b. Established cell strains. *Homo sapiens (Primates)*

RÖSLER, B. Dr.rer.nat. — Biol. Inst., Med. Akad., Erich-Weinerstr. 3, 3014 MAGDEBURG, Deutsche Demokratische Republik
a. Ontogenetic alterations of the serum proteins. *Gerbillus pyramidum, Mesocricetus auratus (Cricetidae, Rodentia), Oryctolagus cuniculus (Lagomorpha)*

ROSS, Mrs. J.R.W.McALLISTER B.Sc., M.B., Ch.B. — Dept. of Anat., Charing Cross Hosp. Med. School, 62 Chandos Place, LONDON W.C.2, England

ROSSI, A. Dr. — Ist. di Anat. comp. "G.B.Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia

ROSSINI, Miss M.C. Dr.Nat.Sci. — Ist. di Anat. comp., Via Belmeloro 8, BOLOGNA (103), Italia
a. Thymus cell differentiation. *(Amphibia)*

ROUSSEV, G. K. Dr. — Med. Research Inst., 27 Blvd. Hristo Botev, SOFIA 6, Bulgaria

ROSTAND, J. M.I.I.E. — 29 Rue Pradier, VILLE D'AVRAY (S. & O.), France
  a. Parthenogenèse et gynogenèse; régulation chromosomique par le froid. *(Amphibia)*
  b. Mutations (polydactylie, ectrodactylie, etc.) et anomalies provoquées par le milieu extérieur (principalement "Anomalie P"). *(Amphibia)*
  c. Action protectrice de la glycérine à l'égard de la congélation des cellules spermatiques. *(Amphibia)*

ROTT, Mrs. N.N. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
  a. Induction of diploid androgenesis by heat treatment. *Ambystoma mexicanum (Urodela)*
  b. Cytological changes in eggs under the effect of high temperature. *Ambystoma mexicanum (Urodela)*
  c. Changes in thermal sensitivity during embryonic development. *Ambystoma mexicanum (Urodela)*

ROULSTON, W.J. M.Sc. — Div. of Entomol., Veter. Parasitol. Lab., C.S.I.R.O., 677 Fairfield Rd., YEERONGPILLY, Queensland, Australia
  a. Esterases in eggs and larvae of strains differing in organophosphorus resistance. *Boophilus microplus (Ixodidae, Acarina)*

ROUX, Ch. Dr.en Méd., Prof.Agr. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
  a. Influence tératogène des intoxications. *Mus rattus (Rodentia)*
  b. Anomalies de l'appareil urogénital. *Mus rattus (Rodentia)*

ROWINSKI, P. Prof. — Ist. di Fisiol. gener. e spec. degli Animali domestici e Chim. biol., Univ. di Torino, TORINO, Italia
  a. Histochemical and chemical determination of acetylcholinesterase and cholinesterase in muscular tissue (skeletal muscle, heart, gizzard) and its significance in relation to the changing parameters of excitability during differentiation. *Gallus domesticus (Aves)*

ROWSON, L.E.A. M.R.C.V.S. — Animal Research Station, A.R.C. Unit. of Reproductive Physiol. and Biochem., Univ. of Cambridge, 307 Huntingdon Rd., CAMBRIDGE, England
  a. Ovum transplantation and artificial insemination. *(Mammalia)*

RUBEN, L.N. A.B., M.S., Ph.D., Prof. — Biol. Dept., The Reed Inst., PORTLAND, Ore. 97202, U.S.A.
  a. The developmental capacity of differentiated cells. *Rana pipiens, Xenopus laevis, Triturus viridescens (Amphibia)*
    1. The interrelationships of cancer and regenerating systems.
    2. The induction of supernumerary limbs.

RUBEN, R.J., M.D. — Sect. on Exper. Embryol., Lab. of Neuroanat.Sci., N.I.N.D.B., Natl.Insts. of Health, BETHESDA, Md.20014, U.S.A.
  a. Histogenesis of the vertebrate inner ear as revealed with tritiated thymidine. *Mus musculus (Rodentia)* (in collaboration with A.J.COULOMBRE)
  b. Experimental embryology of inner ear. *Gallus domesticus (Aves)*

RUCH, J.V. Dr.en Méd. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
  a. Chimiotératogénèse (venins). *(Aves)*

b. Action d'un corticoide (phosphate de dexamétharone) in vivo et in vitro. *(Aves; Mammalia)*

RUDDLE, F.H. B.A., M.S., Ph.D. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, Conn. 06520, U.S.A.

a. Discrimination between genetic and epigenetic events in somatic cells in vitro by studying enzyme variants.

RÜDEBERG, S. I. Ph.D. — Tornblad-Inst. for comp. Embryol., Biskopsgatan 7, LUND, Sweden

RUDNICK, Miss D. Ph.D., M.I.I.E. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, Conn.06520, U.S.A.

a. Glutamine metabolism in development. *Gallus* spec. *(Aves)*

RÜEGG, M. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

RUGH, R. M.A., Ph.D., M.I.I.E., Prof. — Radiol. Res.Lab., Dept. of Radiol., Coll. of Physicians & Surgeons, Columbia Univ., 630 West 168th St., NEW YORK, N.Y. 10032, U.S.A.

a. Heterosis and X-irradiation tolerance. *Mus musculus (Rodentia)*

b. Sensitivity to irradiation of the fetal testes at different stages of development. *Mus musculus (Rodentia)*

c. Reparation of the fetal eye following irradiation insult. *Mus musculus (Rodentia)*

d. Behavior following low-leval fetal X-irradiation. *Rattus norvegicus (Rodentia)*

e. Neuropathological effects of ionizing radiations on the fetus. *(Mammalia)*

f. Behavioral effects of the fetus X-rayed in utero. *(Mammalia)*

g. Heterosis and the development of irradiation congenital anomalies. *(Mammalia)*

h. Electroencephalographic analysis of brain following fetal irradiation. *(Mammalia)*

RULON, G. O. Ph.D., Prof. — Dept. of Biol., Northwestern Univ., EVANSTON, Ill., U.S.A.

RUMPLER, Y. Dr.en Méd. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France

RUNNER, M.N. Ph.D., M.I.I.E. — Dept. of Biol., Univ. of Colorado, BOULDER, Colo. 80304, U.S.A.

a. Interaction of combined environmental influences upon morphogenesis (all possible combinations of pairs of 6 teratogens are tested for synergism and interference effects when given to the pregnant mother at 9 days post coitum). *Mus musculus (Rodentia)*

b. Effects of chemical teratogenesis upon protein synthesis (embryos in vivo and in vitro; effect of treatment upon uptake of amino acids; electrophoretic separations of proteins and enzymes). *Mus musculus (Rodentia), Gallus domesticus (Aves)*

c. The role of maternal metabolism in promoting and preventing abnormal metabolism (highly controlled, germ free, animals are studied by correlating liver and placental enzymes to teratogenesis; experiments during early somite stages). *Mus musculus (Rodentia)*

RUNNSTRÖM, J.A.M. Ph.D., M.D., M.I.I.E., Prof.(Emer.) — Wenner Gren's Inst. for exper. Biol., Norrtullsgatan 16, STOCKHOLM Va., Sweden

- a. The activation impulse in fertilization and artificial parthenogenesis. *(Echinoidea)*
- b. Fine cell structure and cell division *(Echinoidea)*
- c. The bilateral organization of the egg. *(Echinoidea)*
- d. The role of the animal-vegetal balance in development; the character and mode of action of vegetal agents. *(Echinoidea)*

RUSSO-CAIA, S. Prof.Inc. — Lab. di Istol. ed Embriol., Fac. di Scienze, Univ. di Roma, ROMA, Italia

- a. Biochemistry of development. *(Aves; Mammalia)*
- b. Biochemistry of metamorphosis. *Musca domestica (Diptera)*
- c. Cytochemical and autoradiographic investigations on the larval fat body. *Musca domestica (Diptera)*
- d. Cytochemical and autoradiographic investigations on oogenesis. *Antedon* spec. *(Crinoidea, Echinodermata)*, *Dytiscus* spec. *(Coleoptera)*

RUTH, R.F. Ph.D. — Dept. of Zool., Univ. of Alberta, EDMONTON, Alberta, Canada

- a. Immunogenetic analysis of graft rejection and graft-versus-host reactions in the very young animal. *Gallus gallus (Aves)*
- b. The origins of the immunoglobulins. *Gallus gallus (Aves)*
- c. Origin of the immunologically competent cell. *Gallus gallus (Aves)*

RUTSCHKY, C.W. Ph.D., Prof. — Dept. of Entomol., 317 Frear Lab., Pennsylvania State Univ., UNIVERSITY PARK, Pa. 16802, U.S.A.

RYCHTER, Z. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia

- a. Experimental morphology of the aortic arches of the heart loop. *Gallus domesticus (Aves)*
- b. Experimental analysis of cardiovascular anomalies. *Gallus domesticus (Aves)*
- c. Embryonic microhaemodynamics. *Gallus domesticus (Aves)*

RYCZKOWSKI, M. Dr. — Dept. of Plant Physiol., Jagiellonian Univ., Grodzka 53, KRAKÓW, Poland.

- a. Physico-chemical properties of developing ovules. *(Monocotyledona, Dicotyledona, Angiosperma; Gymnosperma)*
- b. pH of developing embryos. *(Plantae)*
- c. Osmotic value of the sap from embryos and endosperm during the development of ovules. *(Plantae)*

RZEHAK, K.F. Ph.D. — Dept. of Biol. and Embryol., Acad. of Med., ul. Kopernika 7, KRAKÓW, Poland.

- a. Neural competence of the ectoderm. *Ambystoma mexicanum (Urodela)*
- b. Cytokinesis in eggs. *Xenopus laevis, Triturus alpestris (Amphibia)*
- c. Stimulation of the regeneration process by blastemal tissue homogenates. *Ambystoma mexicanum (Urodela)*

SABBADIN, A. Dr., Prof. — Ist. di Zool., Anat. comp. e Genet., Fac. di Sci., Via Loredan 10, PADOVA, Italia

- a. Gonad development; influence of hypophysectomy. *(Amphibia)*
- b. Genesis of pigments. *(Botryllidae, Ascidiacea)*

SACARRAO, G. da FONSECA Dr.Sc., Prof. — Museu Bocage, Fac. of Sci., LISBOA, Portugal

- a. Development of the epistellar body. *Octopus* spec., *Argonauta* spec. *(Cephalopoda)*

b. Development of the statocyst. *(Cephalopoda)*
c. Blastokinesis. *Tremoctopus violaceus (Cephalopoda)*

SAEKI, Y. Dr. — Nat. Inst. of Animal Industry, CHIBA-shi, Japan

SAHAROVA, Miss N.G. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
a. The study of subcellular components in radiation cataract. *Rana temporaria (Anura)*

SAITO, T. M.Sc. — Dept. of Anat., Kansai Med. School, Fumizono-cho, Moriguchi, OSAKA, Japan

SAKAI, H. Ph.D. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

SAKAI, Mrs. Y. T. M.A. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

SAKSELA, E.J. M.D. — Lab. of Exp.Embryol., Dept. of Physiol.Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland
a. The applicability of chromosome studies in kidney tubulogenesis. *Mus musculus (Rodentia)*

SAKURAI, T. M.D. — Res. Inst. of Environmental Med., Nagoya Univ., Furo-cho, Chikusa-ku, NAGOYA, Japan
a. Study on X-ray malformations of the eye. *Mus musculus (Rodentia)* (in collaboration with U.MURAKAMI and Y.KAMEYAMA)

SALA, M., S.J. Dr., M.I.I.E., Prof. — Ist. di Zool., Anat. comp. e Genet., Fac. di Sci., Via Loredan 10, PADOVA, Italia
a. The patterns of heterogeneous induction. *Xenopus laevis (Anura)*
b. Parabiosis. *Rana esculenta* x *R. dalmatina (Anura)*
c. The action of lithium on development. *Rana esculenta, R. dalmatina, R. temporaria, Xenopus laevis (Anura)*

SALAÜN, Miss J. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Formation expérimentale d'embryomes homoplastiques et hétéroplastiques. *Gallus gallus (Aves), Rattus rattus (Rodentia)*

SALFI, M. Dr.Sci.Nat., Prof. — Ist. di Zool. dell'Univ. di Napoli, Via Mezzocannone 8, NAPOLI, Italia

SALLES J.M.de B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil.
a. Cytology and cytochemistry of nucleoli in the germinal vesicle. *Bufo paracnemis (Anura)*

SALOMÓN de LEGNAME, Mrs.H. — Inst. de Biol., Univ. Nac. de Tucuman, Fac. de Bioquim., Quim. y Farmacia, Buenos Aires 289, TUCUMAN, Argentina.
— temporarily: Istituto di Zool., Univ. di Roma, ROMA, Italia.
a. Intermediate metabolism during early development: glycolysis. *Bufo arenarum (Anura)*

SALSER, G. M. Dr.med. — Anat. Inst., Währingerstr. 13, WIEN 9, Oesterreich

SALTHE, S.N. B.S., M.A., Ph.D. — Graduate Dept. of Biochem., Brandeis Univ., WALTHAM, Mass.02154, U.S.A.
a. Mechanism of expansion of perivitelline fluid in the egg. *Rana pipiens (Anura)*
b. Study of the hatching enzymes. *(Amphibia)*

c. Development of lactic dehydrogenase isoenzymes. *Rana pipiens, R. palustris (Anura)*

SALZGEBER, Miss B. Dr.ès Sci., M.I.I.E. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France — Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Recherches sur l'action d'agents physiques et chimiques sur la différenciation sexuelle.

b. Action de substances chimiques sur les gonades embryonnaires cultivées in vitro.

c. Etude sur les associations de gonades embryonnaires de deux classes. *Gallus* spec. *(Aves)*, *Mus* spec. *(Rodentia)*

d. Etude des effets tératogènes (malformations de membres) obtenues 1) par l'ypérite azotée (chlorethylamine), 2) par la thalidomide (phtalimidoglutarimide). *Gallus* spec. *(Aves)*

SAMANO BISHOP, Miss A. Dr. — Inst. de Biol., Univ. Nac. Autonoma de México, MÉXICO 20, D.F., México

a. Oogenesis. *Centruroides* spec., *Diplocentrus* spec., *Vejovis* spec. *(Scorpiones, Arachnoidea)*

SAMBUICHI, H. D.Sc. — Zool. Lab., Fac. of Sci., Hiroshima Univ., Higashisenda-cho, HIROSHIMA, Japan

a. The effect of irradiation with γ- and UV-rays on the nucleus and cytoplasm of eggs. *Rana nigromaculata (Anura)*

SAMUELLI, Miss C. Dr. — Ist. di Zool., Univ. di Milano, Via Celoria 10, MILANO, Italia

a. RNA action on development. *(Amphibia)*

SANCHEZ, J. — Inst. de Biol. Celular, Univ. Nacional de Cordoba, Casilla Postal 362, CORDOBA, Argentina

SANCHEZ, Miss S. — Lab. de Biol., Fac. de Méd., MONTPELLIER, France

SANDER, K. Dr.rer.nat., Ph.D., M.I.I.E. Prof. — Zool. Inst. der Univ. Freiburg, Katharinenstr. 20, FREIBURG/Brsg., Deutsche Bundesrepublik

a. Primitiventwicklung; organisationsmuster. *Euscelis plebejus (Cicadina, Homoptera)*

SANT'ANA, Miss Y.X. B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil

a. Cyto-embryology (DNA and nuclear size in development). *Tillapia melanopleura (Teleostei)*

SAPSFORD, C. S. D.V.Sc. — Dept. of Histol. and Embryol., Univ. of Sydney, SYDNEY, N.S.W., Australia

SARA, M. Dott.Nat.Sci., Prof. — Ist.di Zool, dell'Univ. di Napoli, Via Mezzocannone 8, NAPOLI, Italia

SASAKI, N. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan

a. Isolation of inducing agent (protein) and determination of active site(s) of it. *Triturus pyrrhogaster (Urodela), Gallus domesticus (Aves), (Mammalia)*

b. Change of regional effect in primary induction with special reference to molecular structure of inducing agent. *Triturus pyrrhogaster (Urodela), Gallus domesticus (Aves)*

SATHANANTHAN, A.H. B.Sc.(Hons.) — Dept. of Zool., Univ. of Ceylon, COLOMBO, Ceylon — Dept. of Zool., Univ. of Reading, READING, England

a. Descriptive, experimental and physiological embryology. *Arion ater (Pulmonata, Gastropoda)*

SATO, T. D.Sc., D.phil.nat., M.I.I.E., Prof.(Emer.) — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. Biochemical and electron microscopical studies on lens regeneration. *Triturus pyrrhogaster (Urodela)*

b. Comparative studies on lens regeneration. *Lampetra* spec. *(Cyclostomata), (Cobitidinae, Siluridae, Teleostei)*

SATOH, J. Prof. — Dept. of Anat., Fac. of Med., Nagasaki Univ., NAGASAKI, Japan

(no embryological work in progress)

SAUAIA, H. Dr. — Dept. de Morfol. Humana Funcional e Aplicada, Fac. de Med. de Ribeirão Prêto, Univ. de São Paulo, Caixa Postal 301, SÃO PAULO, S.P., Brasil

a. Studies on the salivary gland during larval development. *Rhynchosciara angelae (Diptera)*

b. Oogenesis. *Rhynchosciara angelae (Diptera)*

SAUNDERS, D.S. B.Sc., Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Insect diapause of maternal origin. *Mormoniella vitripennis (Hymenoptera)*

SAUNDERS, J.W. B.S., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Biol., Marquette Univ., 1217 West Wisconsin Ave., MILWAUKEE, Wis. 53233, U.S.A.

a. The role of ectoderm in the development of the limbs. *Gallus domesticus (Aves)*

b. An analysis of the factors affecting tract-specificity in embryonic feather areas. *Gallus domesticus (Aves)*

c. Ectoderm-mesoderm interactions in formation of the limbs. *Gallus domesticus (Aves)*

d. Cellular deaths in morphogenesis. *Gallus domesticus (Aves), Campanularia flexuosa (Coelenterata)*

SAWADA, N. D.Sc. — Biol. Inst., Ehime Univ., MATSUYAMA, Ehime-ken, Japan

a. Physiological studies on the initiation and the processes of the breakdown of germinal vesicles. *(Echiuroidea; Polychaeta; Lamellibranchia)*

b. Structural changes of cortical layers in marine eggs. *(Echiuroidea; Polychaeta; Lamellibranchia)*

SAWIN, P.B. Sc.D. — The Jackson Lab., BAR HARBOR, Me., U.S.A.

a. Normal and abnormal variations in growth of the skeleton in inbred races and in stocks carrying the dwarf genes Dw, Da and ac. *Oryctolagus cuniculus (Lagomorpha)*

SAXÉN, L.O. M.A., M.D., Phil.Lic., M.I.I.E. — Lab. of Exp. Embryol., Dept. of Physiol.Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland

a. Mechanism of primary induction. *Triturus* spec. *(Urodela)* (in collaboration with S.I.TOIVONEN and E.T.VAINIO)
b. Mechanism of kidney tubulogenesis. *Mus musculus (Rodentia)* (in collaboration with S.I.TOIVONEN and E.T.VAINIO)

SCALI, V. Dr.Nat.Sci. — Ist. di Zool. e Anat. comp. dell'Univ., Via A. Volta 4, PISA, Italia
a. Cytology and development. *(Phasmidae, Orthoptera)*

SCHAIBLE, R.H. B.S., M.S., Ph.D. — Genetics Dept., North Carolina State Univ., 353 Gardner Hall, RALEIGH, N.C. 27607, U.S.A.
a. Genetic control of growth and differentiation of pigment cell populations; embryonic and postnatal stages; tissue transplantation and genetic breeding tests. *Gallus gallus (Aves), Mus musculus (Rodentia)*

SCHALEKAMP, M.A.D.H. Ph.D. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands
a. Immunochemical studies of changes in protein composition during embryonic development: proteins of brain, serum and yolk. *Gallus domesticus (Aves)*
b. Immunochemical studies of embryonic haemoglobins. *Gallus domesticus (Aves)*

SCHALEKAMP (KUYKEN), Mrs.M.P.A. Med.Drs. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands
a. Immunochemical and electrophoretic studies of embryonic and adult haemoglobins. *Gallus domesticus (Aves)*

SCHARBERT, W. — Biol. Inst., Med. Akad., Erich-Weinertstrasse 3, 3014 MAGDEBURG, Deutsche Demokratische Republik
a. The postnatal development of the blood picture. *Gerbillus pyramidum (Cricetidae, Rodentia)*

SCHARLOO, W. Ph.D. — Genet. Inst., Univ. of Groningen, Rijksstraatweg 76, HAREN (Gr.), Netherlands
a. Effect of environmental factors and selection on the development of mutant characters. *Drosophila melanogaster (Diptera)*

SCHEFFER, V.B. Ph.D. — Fish and Wildlife Service, Building 192, Sand Point NAS, SEATTLE 15, Wash., U.S.A.
a. Development of dentition. *Callorhinus ursinus (Otariidae, Pinnipedia)*

SCHEIB (PFLEGER), Mrs.D. Dr.ès Sci., M.I.I.E. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
a. Etude du rôle et du comportement des hydrolases acides (lysosomes) des canaux de Müller, au cours de leur différenciation; influence des stéroïdes sexuels sur ces enzymes. *Gallus gallus (Aves)*
b. Etude enzymologique sur les canaux de Müller en liaison avec l'aspect ultrastructural de la régression. *Gallus gallus (Aves)*

SCHILT, J. Lic.ès Sci. — Lab. de Zool. Génér., Fac. des Sci. de Nancy, 30 Rue Ste Cathérine, NANCY, France
a. Tératologie: origine, évolution et transmission des lésions, excroissances et duplications. *Dugesia tigrina (Turbellaria)* (en collaboration avec Fr.STÉPHAN)

SCHLESINGER, A.B. B.A., M.S., Ph.D., Prof. — Dept. of Biol., Creighton Univ., OMAHA, Neb. 68131, U.S.A.
a. Phase cinematographic time-lapse recording of morphogenetic movements of marginal tissue. *Gallus* spec. *(Aves)*

SCHMID, W. Dr. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH, Schweiz
a. Untersuchungen über die Kernstruktur während der Organogenese. *Microtus agrestis (Rodentia)* (in Zusammenarbeit mit K.THEILER)

SCHMIDT, A.J. B.A., M.S., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W.Polk St., CHICAGO 12, Ill., U.S.A.
a. The hormonal influences on regenerating systems. *Triturus viridescens (Urodela)*
b. The chemistry of regenerating systems. *Triturus viridescens (Urodela)*

SCHMIDT, G.A. Dr.biol.sci., M.I.I.E., Prof. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133. U.S.S.R.
a. Early embryology. *Talpa europaea (Insectivora), Ovis aries, Bos taurus, Camelus bactrianus (Artiodactyla)*
b. Embryology. *Lineus desori, L. ruber (Nemertini)*
c. The periodisation of prenatal development. *Bos taurus (Artiodactyla)*

SCHMIDT, G.H. Dr.rer.nat. — Inst. für Angewandte Zool. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik
a. Postembryonic development of holometabolic forms. Esp. *Formica polyctena (Hymenoptera)*

SCHNEIDERMAN, H. A. Ph.D., M.I.I.E. — Developm. Biol. Center, Dept. of Biol., Western Reserve Univ., 2127 Cornell Road, CLEVELAND 6, Ohio, U.S.A.

SCHNETTER, W. Dr.rer.nat. — Zool. Inst. der Univ., Röntgenring 10, WÜRZBURG, Deutsche Bundesrepublik
a. Early embryology. *Leptinotarsa decemlineata (Coleoptera)*
b. Morphogenetic function of egg components; transplantation of nuclei and ooplasm. *Leptinotarsa decemlineata (Coleoptera)*

SCHNITZERLING, H. J. — Veterinary Parasitol. Lab., C.S.I.R.O., Div. of Animal Health, 677 Fairfield Rd., YEERONGPILLY, S.4, Queensland, Australia

SCHOONEVELD, H. M.Sc. — Lab. of Entomol., Agricult. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands
a. Influence of the neurosecretory system on reproduction and diapause. *Leptinotarsa decemlineata (Coleoptera)*

SCHOONHOVEN, L.M. Dr. — Lab. for Entomol., Agricult. Univ., Binnenhaven 7, WAGENINGEN, Netherlands
a. Physiology of diapause. *(Lepidoptera)*

SCHOTTÉ, O. E. Dr., M.I.I.E., Prof. — Dept. of Biol., Amherst Coll., AMHERST, Mass., U.S.A.

SCHOWING, J. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Recherches des inducteurs céphaliques; leur action sur la morphogenèse du crâne. *Gallus gallus (Aves)*
b. Etude expérimentale de la cyclopie. *Gallus gallus (Aves)*
c. Action des lésions nerveuses sur la croissance osseuse. *Gallus gallus (Aves)*

SCHRAMM, S.B. Dr.en Méd., Prof. — Lab. d'Histol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Placenta et annexes foetales. *Homo sapiens (Primates)*
b. Malformations. *Homo sapiens (Primates)*

SCHREIBER, B. M.I.I.E., Prof. — Ist. di Zool. e Anat. comp., Univ. di Parma, PARMA, Italia
a. Experimental morphology of bone induction and inhibitory action of thalidomide. (in collaboration with Miss L.RINALDI)

SCHREIBER, G. Ph.D., Prof. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil.
a. DNA content and nuclear sizes in different tissues of the embryo and adult (Cytophotometric method). *Vaginula taunayisi, Australorbis glabratus (Pulmonata, Gastropoda), Tillapia melanopleura (Teleostei), Hyla faber (Anura)*

SCHRYVER, H.F. B.A., M.S., D.V.M., Ph.D. — Dept. of Pathol., King Ranch Lab. of Reprod. Physiol., School of Veter. Med., Univ. of Pennsylvania, 25th and Locust Sts., PHILADELPHIA 4, Pa., U.S.A.
a. Morphologic and biochemical aspects of skeletal development of the early embryo in organ culture. *(Mammalia)*
b. Studies on chondrocyte hypertrophy including influences on hypertrophy and fate of hypertrophic cells. *(Mammalia)*

SCHULTZ, P.W. B.A., M.A., Ph.D. — Dept. of Biol., Univ. of Colorado, BOULDER, Colo., U.S.A.
a. Ultrastructural and ultracytochemical analysis of normal placenta formation (9 - 12 day yolk sac). *Mus rattus (Rodentia)*
b. Mechanisms of induction of placental abnormalities by teratological agents. *Mus rattus (Rodentia)*
c. The role of placental abnormalities of the embryo itself and in fetal death. *Mus rattus (Rodentia)*

SCHULTZ, R.L. B.A., M.S., Ph.D. — Dept. of Anat., Univ. of Colorado Med. Center, 4200 East Ninth Ave., DENVER, Colo., U.S.A.
a. Enzymes associated with normal and abnormal development. *Mus norvegicus albinus (Rodentia)*
b. Resorption of the embryo and placenta. *Mus norvegicus albinus (Rodentia)*

SCHUMACHER, G.-H. Dr.med., Dr.med.dent., Prof. — Anat. Inst. der Univ. Rostock, Gertrudenstr. 9, 25 ROSTOCK 1, Deutsche Demokratische Republik
a. Allometrische Organuntersuchungen und Osteogenese. *Mesocricetus auratus (Rodentia)*
b. Craniogenese und Osteogenese. *Larus ridibundus, Gallus domesticus (Aves)*

SCHÜNZEL, G. Dr.rer.nat. — Biol. Inst., Med. Akad., Erich-Weinertstr. 3, 3014 MAGDEBURG, Deutsche Demokratische Republik

a. Histochemische und polarisationsoptische Untersuchungen zur Histogenese des Vormagenepithels. *Mus musculus (Rodentia)*
b. Qualitative und quantitative histochemische Untersuchungen zur Klärung von Embryopathien am Magen-Darmtrakt und seinen Anhangsdrüsen nach Strahleneinwirkung während der Gravidität. *Mus musculus (Rodentia)*

SCHWANDER, J. — Inst. de Physiol. Génér., 15 Place Carnot, NANCY (Meurthe & Moselle), France
(no embryological work in progress)

SCHWARTZ, V. Dr.rer.nat., Prof. — Zool. Inst. der Univ., Hölderlinstr. 12, TÜBINGEN, Deutsche Bundesrepublik
a. Cytologie und Entwicklungsphysiologie. *Paramecium bursaria (Holotricha, Ciliata)*
b. Experimentelle Analyse der Ontogenese des Flügelmusters. *Plodia interpunctella (Lepidoptera)*

SCHWARZ, W. Dr.med., Prof. — Forschungsabt. für Elektronenmikroskopie der Freien Univ. Berlin, Königin-Luise-Str. 15, BERLIN-Dahlem

SCHWEISTHAL, M.R. Ph.D. — Dept. of Anat., Med. Coll. of Virginia, RICHMOND 19, Va., U.S.A.
a. Growth of fetal pancreas in organ culture. *Mus musculus (Rodentia)*

SCOTHORNE, R.J. B.Sc., M.D., F.R.S.E., Prof. — Dept. of Anat., Med. School, the Univ., NEWCASTLE upon Tyne 1, England
a. Development of pharyngeal derivatives. *(Aves; Mammalia)*
b. Development of nasal cavity. *(Aves)*

SCOTT, T.K. B.A., M.A., Ph.D. — Dept. of Biol., Oberlin Coll., OBERLIN, Ohio, U.S.A.
a. Auxin movement; the relation between transport and growth in seedlings as influenced by age and light. *Pisum sativum (Leguminosae)*
b. Apical dominance; characterization of the hormonal control exhibited by shoot apices in lateral bud suppression. *Pisum sativum (Leguminosae), Coleus blumei (Labiatae)*

SEARLS, R. L. B.S., Ph.D. — Dept. of Biol., Univ. of Virginia, Gilmer Hall, CHARLOTTESVILLE, Va., U.S.A.
a. Ectoderm-mesoderm interaction in limb development. *Gallus domesticus (Aves)*
b. Metabolic changes in development. *Gallus domesticus (Aves)*
c. Biochemistry of development. *Gallus domesticus (Aves)*

SEDLÁČEK, J. MUDr., Cand.Med.Sci. — Lab. of Embryophysiol., Inst. of Physiol., Fac.Gen.Medicine, Charles Univ., Albertov 5, PRAHA 2, Czechoslovakia
a. Localization of mechanism of temporary connection in prenatal period by potassium depression. *(Aves; Mammalia)*
b. Development of low and high frequency impedance in foetal brain tissue. *(Aves; Mammalia)*
c. Development of steady and membrane potential in foetal brain. *(Aves; Mammalia)*
d. Development of extracellular environment of foetal brain (physical and chemical). *(Aves; Mammalia)*
e. Prenatal development of functional activity of reticular respiratory neurons. *(Mammalia)*

SEDRA, S.N. B.Sc., M.Sc., Ph.D., F.Z.S., M.I.I.E., Prof. — Dept. of Zool., Alexandria Univ., Moharram Bey, ALEXANDRIA, Egypt
a. Behaviour of egg laying. *Rana fusca, Bufo regularis (Anura)*
b. The chronological order of ossification. *Bufo regularis (Anura)*
c. The development of the urogenital system. *Bufo regularis (Anura)* (in collaboration with M.I.MICHAEL and S.H.KHALIL)

SEGAL, E. B.A., M.A., Ph.D., Prof. — San Fernando Valley State College, 18111 Nordhoff St., NORTHRIDGE, Calif. 91326, U.S.A.
a. Effect of low temperature on the production of developmental abnormalities (pre-hatching stages). *Limax flavus (Pulmonata, Gastropoda)*

SEGAL, S.J. B.A., M.S., Ph.D., M.I.I.E. — Div. of Biomed. Sci., Population Council, Rockefeller Inst., NEW YORK, N.Y. 10021, U.S.A.
a. Immunologic analysis of pituitary gonadotrophin function: development and species specificity *(Vertebrata)*
b. Mechanism of hormone action. *(Vertebrata)*
c. Action of blastotoxic chemical agents. *(Vertebrata)*

SEICHERT, V. MUDr. — Dept. of Anat., Charles Univ., U nemocnice 3, PRAHA 2, Czechoslovakia
a. Experimental analysis of limb formation. *Gallus domesticus (Aves)*

SEIDEL, F. Dr.Phil., M.I.I.E., Prof. — Zool. Inst. der Univ., Ketzerbach 63, 355 MARBURG/Lahn, Deutsche Bundesrepublik
a. Entwicklungsphysiologie und chemische Embryologie. *Parascaris megalocephala (Nematoda), Cupiennius salei (Arachnoidea), Platycnemis pennipes, Ischnura elegans, Grillus domesticus, Carausius morosus, Dermestes frischi, Apis mellifica, Drosophila melanogaster (Insecta), Oryctolagus cuniculus (Lagomorpha), Mus musculus (Rodentia)*

SEKIGUCHI, K. Ph.D. — Inst. of Zool., Tokyo Kyoiku Univ., Otsuka-Kubomachi 24, Bunkyo-ku, TOKYO, Japan
a. Transplantation experiments with the egg. *Tachypleus tridentatus (Xiphosura, Arachnida)* (in collaboration with H.OKA)

SELLER, Miss M.J. B.Sc., Ph.D. — Paediatric Research Unit, Guy's Hosp. Med. School, LONDON S.E.1, England
a. Placental transport; comparing maternal and foetal blood levels of physiological substances such as glucose, water, hormones etc. *Rattus rattus (Rodentia)*
b. Haematology of congenital anaemia in the W-series mutants. *Mus musculus (Rodentia)*
c. Experimental teratology. *(Mammalia)*

SELMAN, G.G. Ph.D., M.I.I.E. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Study of certain features of developing embryos using electronmicrographs. *(Amphibia)*
b. The utilization of yolk platelets by embryonic tissues studied by means of a safranin staining method. *Xenopus laevis (Anura)*
c. Development of a hemicell after treatment with a localized microbeam of ultraviolet light. *Micrasterias thomasiana (Desmidioideae, Conjugales)*

SEMBRAT, K. Ph.D., D.Sc., M.I.I.E., Prof. — Zakład Zool. Ogólnej, Inst. Zool., Uniw. we Wrocławiu, ul. Sienkiewicza 21, WROCŁAW, Poland
a. Localization of the primary gonocytes in the early gastrula. *(Amphibia)*
b. The morphogenetic functions of the thyroid gland and hypophysis. *(Pisces; Amphibia; Reptilia; Aves)*

c. Regulation and regeneration of the primary optic vesicle. *Triturus* spec. *(Urodela)*
d. Cytological and cytochemical studies on development. *Eubranchus pallidus (Nudibranchia, Gastropoda)*

SENDER, Miss C. Lic.ès Sci. — Lab. de Zool. expér., Fac. des Sci.de Lyon, 43 Bd. de l'Hippodrome, VILLEURBANNE, France
a. Métabolisme des acides nucléiques. *Caenorhabditis briggsae (Nematoda)*

SENGEL, Ph. Dr.ès Sci., M.I.I.E., Prof. — Lab. de Zool., Fac. des Sci. de Grenoble, Domaine Universitaire, B.P.19, SAINT-MARTIN-d'HÈRES 38, France

SENSENIG, E.C. B.A., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Anat., Univ. of Alabama Med. Center, 1919 Seventh Avenue South, BIRMINGHAM, Ala. 35233, U.S.A.

SENTEIN, P. M.I.I.E., Prof. — Lab. de Biol., Fac. de Méd., 2 Rue Ecole de Médecine, MONTPELLIER, France

ŠERMAN, D. M.Sc. — Inst. of Biol., Fac. of Med., ZAGREB, Šalata, Yugoslavia
a. Metabolism of some embryonic stages. *Rattus norvegicus albinus (Rodentia)* (in collaboration with N.SKREB)

SETOGUTI, T. M.D., Prof. — First Dept. of Anat., Gifu Univ. Med. School, Tsukasa-machi, GIFU, Japan
a. Electronmicroscopical and histochemical study on Wolffian lens regeneration. *Triturus pyrrhogaster (Urodela)*
b. Electronmicroscopical study on the development of guanophores. *Triturus pyrrhogaster (Urodela)*

SETTLE, G.W. A.B., M.D. — Dept. of Embryol., Carnegie Inst. of Washington, 115 W. University Parkway, BALTIMORE, Md. 21210, U.S.A.
a. Anatomy of club-foot deformities (particulary talipes equinovaris) in the fetus. *Homo sapiens (Primates)*

ŠEVČENKO, Mrs. G. MUDr. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a. Development of tastebuds (electron microscopic and cytochemical studies). *Homo sapiens (Primates)*

SHAH, R.V. Ph.D. — Dept. of Zool., M.S.Univ. of Baroda, BARODA 2, India
a. Tail regeneration in embryos and adults. *Gecko* spec., *Mabuya* spec. *(Lacertilia)*

SHANER, R. F. Ph.D., F.R.S.C., Prof. (Emer.) — Dept. of Anat., Med. School, Univ. of Alberta, EDMONTON, Alberta, Canada

SHAPPIRIO, D.G. Ph.D., Prof. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich.48104, U.S.A.
a. Developmental physiology and biochemistry. *(Saturniidae,* etc., *Lepidoptera; Chironomidae,* etc., *Diptera)*

SHAVER, J.R. A.B., Ph.D., M.I.I.E., Prof. — Zool. Dept., Biol. Research Centre, Michigan State Univ., EAST LANSING, Mich. 48823, U.S.A.
a. Investigations of specificity of jelly-coat in fertilization (immunology, biochemistry *Rana clamitans, R. pipiens (Anura)*

b. Studies on initiation of cleavage; chemical and physical agents in formation of spindle. *Rana pipiens (Anura)*
c. Egg transfer studies between species and genera. *Rana* spec., *Bufo* spec. *(Anura)*
d. Fluorescence microscopy and histochemistry of oviducal secretions. *(Raniidae, Anura)*
e. Studies on cleavage-block produced by antibodies. *Rana* spec. *(Anura)*

SHEA, S.M. M.B., B.Ch., B.Sc., M.Sc., M.D. — Dept. of Pathol., Harvard Med. School, 25 Shattuck St., BOSTON, Mass., U.S.A.
a. Regeneration of hepatocytes following partial hepatectomy, or chronic intoxication with carbon tetrachloride (H^3-thymidine autoradiography). *Rattus norvegicus (Rodentia)*
b. A stochastic cellular birth-and-death model and computer simulation, applied to liver regeneration.

SHEN, S. C. Ph.D., M.I.I.E. — Dept. of Anat., Columbia Univ., 630 West 168th St., NEW YORK 32, N.Y., U.S.A.

SHEPARD, T.H. M.D.,Prof. — Central Lab. for Human Embryol., Dept. of Pediat., School of Med., Univ. of Washington, SEATTLE, Wash.98105, U.S.A.
a. Development and function of fetal thyroid (autoradiography, organ culture). *Homo sapiens (Primates)*
b. Effect of rubella virus on the fetus. *Homo sapiens (Primates)*
c. Effect of galactoflavin on the fetus. *Rattus* spec. *(Rodentia)*

SHERBET, G.V. — Chester Beatty Research Inst., Fulham Rd., LONDON S.W.3, England

SHIELD, J.W. B.Sc., M.Sc., Ph.D. — Dept. of Zool., Univ. of W. Australia, NEDLANDS, W.Australia
a. Anoxia tolerance, development of respiratory control in neonatal animals ("pouch foetuses"). *Setonix brachyurus, Macropus robustus (Diprotodontia, Marsupialia)*
b. General development of metabolism in neonatal and juvenile animals. *Setonix brachyurus, Macropus robustus (Diprotodontia, Marsupialia)*

SHIINO, S.M. B.Sc., D.Sc., Prof. — Zool. Inst., Fac. of Fisheries, Pref. Univ. of Mie, 11, Ootanicho, TSU, Mie Pref., Japan
(no embryological work in progress)

SHIN-IKÉ, T. D.Sc., Prof. — Biol. Lab., Osaka Dental Coll., HIRAKATA, Osaka Pref., Japan
a. Factors in the morphogenesis of the pronephric system. *Triturus pyrrhogaster (Urodela)*
b. Tooth development. *(Mammalia)*

SHIOKAWA, K. M.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan
a. Nucleic acid metabolism in developing embryos. *Rana japonica, Xenopus laevis (Anura)*
b. Teratogenic effects on developing embryos of some nucleic acid-base analogues. *Xenopus laevis (Anura)*

SHIOMI, T. Dr. — Lab. of Radiat. Genet., Res. Inst. for Nuclear Med. and Biol., Hiroshima Univ., Kasumi-cho, HIROSHIMA, Japan
a. Radiation genetics (embryo, germ cells). *Drosophila melanogaster (Diptera)*

SHOGER, R.L. A.B., M.S., Ph.D. — Dept. of Biol., Carleton Coll., NORTHFIELD, Minn. 55057, U.S.A.

a. Regulative capacity of the node region. *Gallus domesticus (Aves)*

b. Further investigation on EDTA (versene) inhibition of definitive streak embryos. *Gallus domesticus (Aves)*

c. Studies on the continuity of primordial germ cells from first appearance to functional gametes. *Gallus domesticus (Aves)*

SHORT, B.F. M.Agr.Sc., Ph.D. — Div. of Anim.Physiol., C.S.I.R.O., Ian Clunies Ross Animal Res. Lab., Great Western Highway, (P.O.Box 144, Parramatta), PROSPECT, N.S.W., Australia

a. Morphogenesis of wool follicles and fibres. *Ovis* spec. *(Artiodactyla)*

SHULOV, A. Dr.Sc., Prof. — Dept. of Entomol. and Venomous Animals, Hebrew Univ., JERUSALEM, Israel

a. Development of eggs and the role of water in it. Locusta migratoria migratorioides *(Acrididae, Orthoptera)*

b. Egg development. *Nomadacris septemfasciata (Acrididae, Orthoptera)*

c. External morphology of eggs. *Xenopsylla cheopis (Aphaniptera)*

d. Influence of external factors (temperature, humidity) on egg development. *Acrotylus insubricus, Ailopus thalassinus, Morphacris fasciata sulcata, Oedipoda miniata, O. aurea, O. coerulescens, Locusta migratoria migratorioides, Nomadacris septemfasciata (Acrididae, Orthoptera)* (in collaboration with M.P.PENER)

SHUPE, J.L. — Animal Disease and Parasite Res. Div., Agric. Res. Service, U.S.Dept. of Agric., 1150 East 14th North, LOGAN, Utah 84321, U.S.A.

a. The association of poisonous plants with congenital deformities. *(Mammalia)*

SIDOROVA, Mrs.V.F. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.

a. Study of processes of organ regeneration. *(Vertebrata)*

SIGNORET, J. Dr.ès Sci., Prof. — Dépt. de Biol. Anim., Fac. des Sci., CAEN, Calvados, France

a. Study of nuclear differentiation and specific activities by means of nuclear transplantation. *Ambystoma mexicanum (Urodela)*

b. Study of chromosome changes during cellular differentiation. *Ambystoma mexicanum (Urodela)*

SIGOT, M. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Morphogénèse du tube digestif en culture in vitro. *Gallus* spec. *(Aves)*

SIGOT (LUIZARD), Mrs.M.F. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Culture de tissus cancéreux sur des organes embryonnaires de poulet explantés in vitro. *Mus musculus, Rattus rattus, Homo sapiens (Mammalia)*

SILÉN, L.K.P. Fil.Dr., Prof. — Zool. Inst., Univ. of Stockholm, 70A Rådmansgatan, STOCKHOLM, Sweden

a. Embryology. *(Bryozoa)*

SILVA MURTA, Mrs.J.M. da B.Sc. — Inst. de Biol. Geral, Fac. de Filosofia, Univ. de Minas Gerais, Caixa Postal 253, BELO HORIZONTE, M.G., Brasil

a. Embryology of nephridia. *Peripatus acacioi (Onychophora)*

SILVER, P. H. S. M.B., B.S., Ph.D. — Anat. Dept., Middlesex Hosp. Med. School, LONDON W.1, England

SIMKISS, K. B.Sc., Ph.D. — Dept. of Physiol. Chem., the Univ., READING, England

a. Comparative studies on Ca and Mg in embryos.

SIMS, R.T. M.A., M.B. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England

a. Development of melanocytes. *Xenopus laevis (Anura)*

b. Development of spinal cord. *Xenopus laevis (Anura)*

SINCLAIR, J.G. B.S., M.S., Ph.D., Prof.(Emer.) — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.

a. Anterior cerebral nerve plexus in adult and fetus. *Tursiops truncatus, Oryctolagus cuniculus, Mus musculus, Homo sapiens (Mammalia)*

b. Continued study of transplacental effects of drugs. *Mus musculus (Rodentia)*

c. Development of head structure with special attention to cranial nerves, blowhole and ear. *Prodelphinius coerulealbus (Cetacea)*

SINGER, M. B.S., M.A., Ph.D., Prof. — Developm. Biol. Center, Dept. of Anat., Western Reserve Univ. School of Med., 2127 Cornell Road, CLEVELAND, Ohio 44106, U.S.A.

SINGER, R. M.B., Ch.B., D.Sc., F.R.S.S.A., FRAI, Prof. — Dept. of Anat., Univ. of Chicago, CHICAGO 37, Ill., U.S.A.

a. General embryology. *Homo sapiens (Primates)*

b. General embryology. *Hystrix africaeaustralis (Rodentia)*

SINGH, I. M.B.B.S., M.S. — Dept. of Anat., Med. Coll., ROHTAK, Punjab, India

a. Distribution of enterochromaffin cells in the gastrointestinal tract of foetuses. *Homo sapiens (Primates)*

b. Relative proportion of argyrophile and argentaffin cells in the gastrointestinal tract of foetuses. *Homo sapiens (Primates)*

SINGH-ROY, K.K. M.B., B.S., D.Phil. — Cell Research Unit, Dept. of Zool., Univ. of Calcutta, 35, Ballygunje Circular Road, CALCUTTA 19, India

a. Development of the vertebral column. *Homo sapiens (Primates)*

b. Development of the cranio-vertebral joint. *Homo sapiens (Primates)*

SINHA, A.K. M.Sc., Ph.D. — Dept. of Zool., Presidency Coll., CALCUTTA 12, West Bengal, India

a. Differentiation in relation to regeneration. *(Hydroidea)* (in collaboration with S.MOOKERJEE and B.GANGULY)

SIRAKAMI, K. I. Sc.Dr., M.I.I.E. — Dept. of Biol., Yamanashi Univ., KOFU, Japan

SIRLIN, J.L. Dr.Nat.Sci., M.I.I.E. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Biochemistry of newly synthesized larval salivary gland RNA. *Smittia parthenogenetica (Chironomidae, Diptera)* (in collaboration with J. JACOB)
b. Ultrastructural cytochemistry of the nucleus of larval salivary glands. *Smittia parthenogenetica (Chironomidae, Diptera)* (in collaboration with J.JACOB)

SJÖSTRAND, F.S. M.D., Ph.D., Prof. — Dept. of Zool., Univ. of California, LOS ANGELES 24, Calif., U.S.A.
a. Descriptive and biochemical molecular morphogenesis.
b. Morphogenesis of retinal receptor cells.
c. Morphogenesis of mitochondria, Golgi apparatus and other cytoplasmic membranes.

SKALKO, R.G. A.B., M.S., Ph.D. — Dept. of Anat., Med.Coll., Cornell Univ., 1300 York Avenue, NEW YORK, N.Y. 10021, U.S.A.
a. In vitro methodology to analyse nucleic acid metabolism in the pre-implantation embryo. *Mus musculus (Rodentia)*
b. Chemical teratogenesis in vitro (pre-implantation embryo). *Mus musculus (Rodentia)*

SKINNER (SÜLTER), Mrs. M. M.Sc. — Zool. Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
a. Ontogenesis of the skull. *Mabuia capensis (Scincidae, Lacertilia)*

SKOWRON (CENDRZAK), Mrs. A. Ph.D. — Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKÓW, Poland

SKOWRON, S. Ph.D., Prof. — Dept. of Biol. and Embryol., Acad. of Med. and Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKÓW, Poland

ŠKREB, N. M.D., D.Sc., M.I.I.E., Prof. — Inst. of Biol., Fac. of Med., ZAGREB, Šalata, Yugoslavia
a. Investigation of the differentiation of the embryo in the anterior chamber of the eye and in vitro. *Rattus norvegicus albinus (Rodentia)* (in collaboration with Mrs. B. LEVAK (ŠVAJGER))
b. Action of several antimitotics on development. *Rattus norvegicus albinus (Rodentia)* (in collaboration with M.MÜLLER)
c. Relative growth of organs in the embryo. *Rattus norvegicus albinus (Rodentia)* (in collaboration with L.HOFMAN)
d. Metabolism of some embryonic stages. *Rattus norvegicus albinus (Rodentia)* (in collaboration with D. ŠERMAN)

SLABÝ, O. MUDr., RNDr., D.Sc., M.I.I.E., Prof. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia
a. The development of the skull. *(Amniota,* incl. *Homo sapiens)*
b. The development of the limbs. *(Amniota,* incl. *Homo sapiens)*
c. The development of the nasal cavity. *(Amniota,* incl. *Homo sapiens)*
d. Experimental analysis of the morphogenesis of the limbs. *Rattus rattus (Rodentia), Homo sapiens (Primates)*
e. Factors producing malformations. *(Amniota,* incl. *Homo sapiens)*

SLADEČEK, F. RNDr., CSc., M.I.I.E., Prof. — Dept. of Gener. and Exp. Zool., Charles Univ., Vinična 7, PRAHA, 2, Czechoslovakia
a. Transplantation of nuclei and cytoplasmic components. *(Amphibia)*
b. Nucleo-cytoplasmic relations in early development. *(Amphibia)* (in collaboration with A. ROMANOVSKÝ)

SLAMA, K. Prom.biol., C.Sc. — Dept. of Insect Physiol., Entomol. Inst., Czechoslovak Acad. of Sci., Na Folimance 5, PRAHA 2, Czechoslovakia

SLIJPER, E.J. Dr., Prof. — Zool. Lab., Univ. of Amsterdam, Plantage Doklaan 44, AMSTERDAM C., Netherlands
a. The embryonic blood circulation (ductus Botalli, ductus Arantii etc.), particularly in aquatic forms. *(Mammalia)*

SLÍPKA, J. MUDr., RNDr., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEN, Czechoslovakia
a. The development and teratology of the branchial region. *(Amniota,* incl. *Homo sapiens)*
b. The early development of the thyroid gland. *(Amniota,* incl. *Homo sapiens)*

SMIRNOWA, Mrs.E.I. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
a. The influence of medicaments and various sorts of ionizing radiation on the development of embryos. *(Aves; Mammalia)*
b. The influence of some agents on the changes of development of heart, blood vessels and liver. *(Aves; Mammalia)*

SMIT, M.P. Vet.Surg. — Veter. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands
a. Normal development of the kidney. *Bos taurus (Artiodactyla)*

SMIT, P. Med.drs. — Div. of exper.Morphol., Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands
a. Effect of X-rays on ovarial oogenesis. *Mus* spec. *(Rodentia)* (in collaboration with H.A.L.TRAMPUSCH)

SMITH, A.E.S. A.B., Ph.D. — Dept. of Devel. Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif., U.S.A.
a. Regulation of protein and nucleic acid synthesis at fertilization and during subsequent development. *Urechis caupo (Gephyrea, Annelida), (Echinoidea)*

SMITH, K.D. Ph.D. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.
a. Regulation of macromolecular synthesis. *Lytechinus pictus (Echinoidea), Ascidia nigra (Tunicata)*

SMITH, L.D. Ph.D. — Div. of Biol. and Med. Res., Argonne Natl. Lab., 9700 South Cass Ave., ARGONNE, Ill. 60440, U.S.A.
a. Embryological and genetical studies on origin of germ cells. *Ambystoma mexicanum (Urodela)*

SMITH, S.T. B.Sc. — Dept. of Zool., Univ. of Bristol, BRISTOL 8, England
a. Embryology. *Retusa obtusa (Bullomorpha, Opisthobranchia, Gastropoda)*

SMITHBERG, M. Ph.D., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.

a. Experimental teratology. *Oryzias latipes (Teleostei), Mus musculus (Rodentia)*

SMITTEN, Mrs.N.A. Cand.med.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Development of the sympatho-adrenal system. *(Amphibia; Aves; Mammalia)*

b. Comparative embryological and experimental investigations of developmental sources and of functional activity of the adrenal system cells (light and electron microscopy). *Rana arvalis, R.temporaria (Anura), Lacerta agilis (Lacertilia), Gallus domesticus (Aves), Rattus norvegicus, Mus musculus, Oryctolagus cuniculus (Mammalia)*

SMOLKER, R.E. B.S., M.A., Ph.D., Prof. — Dept. of Biol., State Univ. of New York at Stony Brook, STONY BROOK, N.Y., U.S.A.

a. Migration and localization of primordial germ cells. *(Aves), Didelphys virginiana (Marsupialia)*

SMRECZYŃSKI, S. Ph.D. — Zool. Dept., Jagiellonian Univ., ul. Krupnicza 50, KRAKOW, Poland

(no embryological work in progress)

SNELLEN, H.A. Med.Dr., Prof. — Dept. of Cardiol., Fac. of Med., Acad. Ziekenhuis, LEIDEN, Netherlands

a. Heart and vessels in congenital malformations. *Homo sapiens (Primates)* (in collaboration with J.DANKMEIJER, Miss A.DEKKER and Miss H.C.van INGEN)

SOKOLOVA, Mrs.Z.A. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.

a. The influence of ionizing on structure and function of retinal cells. *Rana* spp. *(Anura)*

b. The development and structure of the eye. *Limnaea stagnalis (Gastropoda)*

c. Regeneration of the eye lens. *Limnaea stagnalis (Gastropoda)*

d. Mitotic activity of retinal cells. *(Anura)*

e. The influence of some parts of the retina on the induction and differentiation of the lens. *(Anura)*

SOLÈRE, M. Dr.en Méd. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts.Pères, PARIS VIe, France

a. Développement normal et anormal de l'appareil digestif. *Mus rattus (Rodentia), Homo sapiens (Primates)*

SOLOMON, J.B. Ph.D. — Chester Beatty Research Inst., Fulham Rd., LONDON S.W.3, England

a. Onset of immune mechanisms in young animals. *Gallus domesticus (Aves)*

b. Trophoblastic and tumour growth. *Mus* spec. *(Rodentia)*

SOMA, T. — Nat. Inst. of Animal Industry, CHIBA-shi, Japan

SOMERS, G.F. D.Sc., Ph.D.(Med.), F.P.S., F.I.Biol. — Reckitt & Sons, 160 Dansom Lane, HULL, England

a. The teratogenic effects of drugs; testing of drugs for foetal toxicity. *(Mammalia)*

SONDHI, K.C. M.Sc., Ph.D. — Dept. of Physiol. and Zool., Rutgers Univ., NEWARK, N.J., U.S.A.

a. Gene-controlled processes in the genesis of symmetry. *Drosophila melanogaster, D. subobscura (Diptera)*

b. Evolutionary morphogenesis. *Drosophila melanogaster, D. subobscura (Diptera)*

c. Development and ageing. *Drosophila melanogaster, D. subobscura (Diptera)*

SORIANO, L.I. M.D. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

a. Différenciation des épitheliums par la méthode des dissociations et réassociations en culture in vitro. *Mus musculus (Rodentia)*

SOROKIN, S. P. A.B., M.D. — Dept. of Anat., Harvard Med. School, 25 Shattuck St., BOSTON 15, Mass., U.S.A.

SOTTYŃSKA (MARCINKOWSKA), Mrs. M. Mgr.of Sci. — Inst. of Zool., Warsaw Univ., WARSZAWA 64, Poland

a. Morphogenesis of spores. *(Myxosporidia)*

SOUPART, P. M.D., Ph.D. — Dept. of Obstetrics and Gynecol., Vanderbilt Univ. School of Med., NASHVILLE, Tenn. 37203, U.S.A.

a. Chemical composition and structure of the zona pellucida. *(Mammalia)*

b. Studies on the nature of sperm capacitation. *Oryctolagus cuniculus (Lagomorpha)*

SOVÁ, J. MUDr., C.Sc. — Inst. of Histol. and Embryol., Fac. of Med., Charles Univ., Karlovarská 48, PLZEŇ, Czechoslovakia

a. Ontogeny and phylogeny of the processes in the apocrine type of secretion. *(Amniota)*

SPERRY, R. W .Ph.D., M.I.I.E. — Div. of Biol., California Inst. of Techno.. PASADENA, Calif., U.S.A.

SPIEGEL, Mrs.E.SCLUFER B.S., M.A., Ph.D. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H., U.S.A.

a. Protein changes in development. *Lytechinus pictus, Strongylocentrotus purpuratus (Echinoidea), Rana pipiens, R. catesbeiana (Anura)* (in collaboration with M.SPIEGEL)

b. Role of enzyme induction in development. *Rana pipiens, R. catesbeiana (Anura)* (in collaboration with M.SPIEGEL)

c. Biochemistry of metamorphosis. *Rana pipiens, R. catesbeiana (Anura)*

SPIEGEL, M. B.S., Ph.D., M.I.I.E., Prof. — Dept. of Biol. Sci., Dartmouth Coll., HANOVER, N.H., U.S.A.

a. Protein changes in development. *Arbacia punctulata, Lytechinus pictus, Strongylocentrotus purpuratus (Echinoidea), Rana pipiens, R. catesbeiana (Anura)* (in collaboration with Mrs.E.SCLUFER-SPIEGEL)

b. Role of enzyme induction in development. *Rana pipiens, R. catesbeiana (Anura)* (in collaboration with Mrs.E.SCLUFER-SPIEGEL)

SPINNER, W. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

SPIRITO, A. Dott., M.I.I.E., Prof. — Ist. di Biol. gener., Fac. di Med., Via del Giochetto, PERUGIA, Italia

a. Origine e natura dei tumori. *Bufo* spec. *(Anura)*

SPISAK (PŁONKA), Mrs. I. M.Sc. — Dept. of Biol. and Embryol., Acad. of Med., ul. Kopernika 7, KRAKÓW, Poland

SPOFFORD, W.R. Ph.D., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.

a. Induction and determination in the neural plate. *Ambystoma maculatum (Urodela)*

b. Experimental neurogenesis. *Ambystoma maculatum (Urodela)*

SPRATT, N.T., Jr. A.B., Ph.D., F.I.I.E., Prof. — Dept. of Zool., Coll. of Biol.Sci., Univ. of Minnesota, MINNEAPOLIS, Minn.55455, U.S.A.
  a. Investigating the nutrient requirements essential to morphogenesis and growth in the early stages of development (pre-streak and streak blastoderms). *Gallus domesticus (Aves)*
  b. Survey of dehydrogenase enzymes in early embryos. *Gallus domesticus (Aves)*
    1. Localization of enzyme activity.
    2. Structural integrity and enzyme activity.
  c. Cytological study of the developmental center (organizer). *Gallus domesticus (Aves)*
  d. Analysis of mechanism of morphogenetic movements by time-lapse cinematography. *Gallus domesticus (Aves)*
  e. Analysis of dynamic population patterns (pattern formation by free-swimming, ciliated and flagellated organisms). *Tetrahymena* spec., *Euglena* spec. *(Protozoa), Arbacia punctulata (Echinoidea)*
  f. Integrative mechanisms in early development. *(Aves)*
  g. Role of the microenvironment in cell differentiation. *(Aves)*

SPRINGER, Ch.A. M.S. — Dept. of Entomol., Frear Labs, Pennsylvania State Univ., UNIVERSITY PARK, Pa. 16802, U.S.A.
  a. Development of the neural elements in the central nervous system. *Triatoma* sp., *Cimex* sp. and other spp. *(Hymenoptera)*

SREBRO, Z. A. D.M. — Dept. of Biol. and Embryol., Acad. of Med., ul. Kopernika 7, KRAKÓW, Poland

SRINIVASACHAR, H. R. B.Sc., M.Sc., Ph.D. — Dept. of Zool., Central Coll., BANGALORE 1, India

STAAL, G.B. Dr., Ir. — Lab. of Entomol., Agricult. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands
  a. Hormonal regulation of development, heteromorphosis and metamorphosis. *(Saturnidae, Lepidoptera)*

STAGNI, Miss A. Dr., Prof. — Ist. di Zool., Via S.Giacomo 9, BOLOGNA, Italia
  a. Regeneration, origin of germ-cells and gametogenesis. *Spirorbis pagenstecheri (Serpulidae, Polychaeta)*
  b. Sex determination and sex differentiation. *Chlorohydra viridissima (Hydroidea)*
  c. Cytochemical and electron microscopical study of oogenesis and spermatogenesis. *Chlorohydra viridissima (Hydroidea)*

STALSBERG, H. Cand.med. — Anat. Inst., Univ. of Oslo, Karl Johansgt. 47, OSLO, Norway
  a. Extirpation of the epiphysis cerebri in the embryo. *Gallus domesticus (Aves)*
  b. Hemostasis in the embryo. *Gallus domesticus (Aves)*

STAMPE, D. Dr.rer.nat. — Max Planck Inst. f. Meeresbiol., Anton Dohrn Weg, 2940 WILHELMSHAVEN, Deutsche Bundesrepublik
  a. Mechanism of embryonic induction. *Triturus* spec. *(Urodela)*
  b. RNA-metabolism in early development. *Triturus* spec. *(Urodela)*

STANGE, Miss L. Dr.rer.nat., Prof. — Inst. für Botanik, Techn. Hochschule, Herrenhäuser Str. 2, 3 HANNOVER, Deutsche Bundesrepublik

a. Meristems and cell differentiation; embryonization of specialized cells. *Riella helicophylla (Hepaticae)*

STAPLES, R.E. B.S.A., M.Sc., Ph.D. — Worcester Foundation for Exp. Biol., 222 Maple Avenue, SHREWSBURY, Mass., U.S.A.

a. Zygote development (physiological, biochemical). *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*

b. Induction of pseudo pregnancy (physiological). *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*

c. Teratology. *Oryctolagus cuniculus (Lagomorpha), Rattus norvegicus (Rodentia)*

STARCK, D. Dr.Med., M.I.I.E., Prof. — Dr. Senckenberg. Anat. Inst., Med. Fak. der Univ., Ludwig Rehnstr. 14, FRANKFURT/Main-Süd, Deutsche Bundesrepublik

STEDING, G. Dr.med. — Anat. Inst. der Univ., Kreuzbergring 36, GÖTTINGEN, Deutsche Bundesrepublik

a. Experimente zur Entwicklung des Rückenmarkes. *Gallus gallus (Aves)*

b. Selbstdifferenzierung der Somiten. *Gallus gallus (Aves)*

c. Frühentwicklung. *Gallus gallus (Aves)*

d. Strukturentwicklung des Uterus. *Homo sapiens (Primates)*

STEFAN, Miss Y. Dr.ès Sci. — Lab. de Zool. et d'Embryol. expér., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France

a. Morphogénèse du tractus génital et des gonades. *Emys leprosa (Chelonia), (Ophidia)*

STEFANELLI, A. Dr., M.I.I.E., Prof.ord. — Ist. di Anat. comp. "G.B. Grassi", Fac. di Sci., Univ. di Roma, Via Borelli 50, ROMA, Italia

STEGNER, H.-E. Dr.med. — Frauenklinik der Univ., Univ.-Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutsche Bundesrepublik

a. Histotopochemische und elektronenmikroskopische Untersuchungen an Oozyten verschiedener Reife. *Homo sapiens (Primates)* (in Zusammenarbeit mit H.WARTENBERG)

b. Organogenese des weiblichen Genitaltraktes: histotopochemische und elektronenmikroskopische Untersuchungen. *Homo sapiens (Primates)*

STEIN, Miss K.F. A.B., M.S., Ph.D., Prof. — Dept. of Biol. Scis., Clapp Lab., Mount Holyoke Coll., SOUTH HADLEY, Mass.01075, U.S.A.

a. The culture in vitro of mutant embryos, e.g. Lp/Lp; tracer studies. *(Rodentia)*

STEINBERG, D. M. Dr.Biol.Sci., Prof. — Zool. Inst., Acad. of Sci. of the U.S.S.R., Universitetskaja Nabereshnaja 1, LENINGRAD B-164, U.S.S.R.

STEINBERG, M.S. B.A., M.A., Ph.D., Prof. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.

a. Mechanisms of morphogenetic movement: study of organization patterns adopted by gastrula tissues recombined in vitro. *Rana pipiens (Anura)* (in collaboration with J.L.KELLAND)

b. Mechanisms in cell aggregation and tissue reconstruction (kinetics of cell collisions, stability and strength of cellular adhesions, cell population behaviour). *(Porifera), Rana pipiens (Anura), Gallus domesticus (Aves)*

c. Physics and chemistry of cell surfaces in relation to cell adhesion (titration of charged groups at cell surfaces by microelectrophoresis of living

cells; identification of chemical groups at cell surfaces; effects of enzymes upon intercellular adhesion). *(Porifera), Gallus domesticus (Aves)*
  d. Mechanisms of nerve-end organ integration (studies of reflex behavior after regeneration of sensory nerves into a topographically rearranged integumental field). *Rana pipiens (Anura)*

STEINITZ, H. Ph.D. — Dept. of Zool., Hebrew Univ. of Jerusalem, JERUSALEM, Israel
  a. Regeneration. *(Salamandridae, Urodela)*

STENGER (HAFFEN), Mrs.K.E. Dr.ès Sci., M.I.I.E. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
  a. Recherches sur la différenciation et l'intersexualité in vitro et in vivo des gonades embryonnaires. *(Aves)* (en collaboration avec Et. C.WOLFF)

STÉPHAN, Fr. Dr.ès Sci., Prof. — Lab. de Zool. Génér., Fac. des Sci. de Nancy, 30 Rue Ste Cathérine, NANCY, France
  a. Les malformations cardio-vasculaires: analyse causale de l'action tératogène de diverses substances, par ex. bleu trypan. *Gallus gallus (Aves)*
  b. Tératologie: origine, évolution et transmission des lésions, excroissances et duplications. *Dugesia tigrina (Turbellaria)* (en collaboration avec J.SCHILT)
  c. Développement du système trachéen, chez l'embryon et la larve (étude expérimentale). *Tipula flavolineata (Diptera)* (en collaboration avec J.C.PIHAN)

STÉPHAN (DUBOIS), Mrs.F. Dr.ès Sci., M.I.I.E. — Lab. de Zool. Génér., Fac. des Sci. de Nancy, 30 Rue Ste Cathérine, NANCY, France
  a. Migration et différenciation des cellules de régénération. *Planariidae* d'eau douce, *Oligochaeta microdrila, Polychaeta errantia)*

STEPHENSON, Mrs.E.M. M.Sc., Ph.D., Prof. — Dept. of Zool., School of Biol. Sci., Univ. of New South Wales, P.O.Box 1, KENSINGTON, N.S.W., Australia
  a. The behaviour of epithelial cells. *Amphibolurus barbatus (Reptilia), Gallus domesticus (Aves), Mus musculus (Rodentia)*
  b. Organ and cell culture. *Limnodynastes peroni (Leptodactylidae, Anura)*
  c. Culture of larval hearts. *Mordacia mordax (Cyclostomata)*

STEPHENSON, N.G. M.Sc., Ph.D. — Zool. Building, School of Biol. Scis., Univ. of Sydney, SYDNEY, N.S.W., Australia
  a. Embryonic tissue and cell culture. *Limnodynastes peroni (Leptodactylidae, Anura), Amphibolurus barbatus (Agamidae, Lacertilia)*
  b. Descriptive embryology. *(Macropidae, Peramelidae, Phalangeridae, Marsupialia)*

STERN, C. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY 4, Calif., U.S.A.
  a. Developmental genetics of pattern formation. *Drosophila melanogaster* ***(Diptera)***

STERN, K. M.D., Prof. — Dept. of Pathol., Coll. of Med., Univ. of Illinois, 1853 W.Polk St., CHICAGO, Ill. 60612, U.S.A.

a. Relationship of reticulo-endothelial function to growth processes, as exemplified by liver regeneration after partial hepatectomy. *Rattus* spec. *(Rodentia)*

STEVENS, L.C. Ph.D. — The Jackson Lab., BAR HARBOR, Me., U.S.A.

a. Histogenesis of testicular teratoma (strain 129). *Mus musculus (Rodentia)*

b. Developmental genetics. *Mus musculus (Rodentia)*

STEVENSON, J.Ross B.A., M.S., Ph.D. — Dept. of Biol. Sciences, Kent State Univ., KENT, Ohio 44240, U.S.A.

a. Development of tegumental glands and histochemical study to elucidate functions of these glands. *Armadillidium vulgare (Oniscoidea, Isopoda)*

b. Study of sclerotization (phenolic tanning) of developing cuticle by chemical assays and radioisotopes. *Orconectes propinquus (Decapoda, Crustacea)*

STINSON, B.D. B.S., M.S., Ph.D. — Dept. of Anat., Med. Coll., Cornell Univ., 1300 York Avenue, NEW YORK, N.Y. 10021, U.S.A.

a. Regeneration of X-irradiated limb stumps following implantation of normal tissues (adult). *Triturus viridescens (Urodela)*

b. Effect of acute X-irradiation on regeneration of neural retina and lens in reimplanted eyes of adult animals. *Triturus viridescens (Urodela)*

c. Effect of parathyroid extract on regeneration of limbs in adult animals. *Triturus viridescens (Urodela)*

STOCK, A. D.Phil., Ph.D., Prof. — Dept. of Zool., Univ. of New England, ARMIDALE 5 N., N.S.W., Australia

a. Regeneration and the endocrine system. *Blattella germanica (Dictyoptera, Insecta)* (in collaboration with A.F.O'FARRELL and Miss J. MORGAN)

STOCKARD, A.H. Ph.D. — Dept. of Zool., Univ. of Michigan, ANN ARBOR, Mich.48104, U.S.A.
(no embryological work in progress)

STOCUM, D.L. B.A., M.S. — Dept. of Biol., School of Dental Med., Univ. of Pennsylvania, PHILADELPHIA, Pa. 19104, U.S.A.

a. Development of intestinal villi. *Gallus domesticus (Aves)*

b. Development of regeneration blastemata. *Ambystoma maculatum (Urodela)*

STOLL, R. Dr.en Méd., Dr.ès Sci., Prof. — Lab. de Biol., Fac. de Méd., Univ. de Bordeaux, BORDEAUX, France

a. Différenciation sexuelle. *(Aves)*

b. Physiologie des glandes endocrines embryonnaires. *(Aves)*

c. Teratologie. *(Aves)*

STONE, L. S. Ph.B., Ph.D., M.I.I.E., Prof. — Anat. Dept., School of Med., Yale Univ, 333 Cedar St, NEW HAVEN 11, Conn., U.S.A.
— Dept. of Biol. (Osborn Lab.), Yale Univ., NEW HAVEN 11, Conn., U.S.A.

STOUT, Miss V.M. M.Sc., Ph.D. — Dept. of Zool., Univ. of Canterbury, CHRISTCHURCH, New Zealand

a. Descriptive embryology. *Lepidurus apus (Notostraca, Crustacea), Daphnia magna (Cladocera, Crustacea)*

STRAHAN, R. M.Sc. — School of Biol. Sci., Univ. of New South Wales, Box 1, Post Office, KENSINGTON, N.S.W., Australia

STRATFORD(MILLER), Mrs.B.F. M.B., B.S., Ph.D. — Dept. of Anat., Univ. of Melbourne, PARKVILLE, N.2, Victoria, Australia
a. Developmental abnormalities in early embryos. *Homo sapiens (Primates)*

STRAUSS, F. M.D., M.I.I.E., Prof. — Dept. of Anat., Univ. of Bern, 26 Buehlstr., 3012 BERN, Switzerland
a. Comparative implantation and placentation. *(Mammalia)*
b. Comparative anatomy of the female reproductive system. *(Mammalia)*

STRAZNICKY, Ch. Ph.D. — Anat. Dept., Med. Univ., Dischka u 5, PÉCS, Hungary
a. The mechanism of determination of the limb moving segmental apparatus. *Pleurodeles waltlii (Urodela)* (in collaboration with G.SZÉKELY)
b. Development of heteroplastic motor end plates in limb muscles; a histochemical study of heteroplastic limb grafts. *Gallus domesticus, Anas platyrhyncha,* var. *dom. (Aves)*

STREETT, J.C. A.B., A.M., Ph.D. — Div. of Sci., Texas Wesleyan Coll., FORT WORTH, Tex., U.S.A.
a. Regeneration of the hepatic artery, hepatic portal vein, and common bile duct. *Rana pipiens (Anura)*

STREIFF, W. Lic.ès Sci. — Lab. de Biol. génér., Fac. des Sci., 118 Route de Narbonne, TOULOUSE, France
a. Etude endocrinologique et cytologique au cours du développement; cultures organotypiques et histiotypiques. *(Capulidae, Prosobranchia, Gastropoda)*

STROEVA, Miss O.G. Cand.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.
a. Experimental analysis of developmental mechanisms of hereditary microphthalmia. *Mus musculus, Rattus norvegicus albinus (Rodentia)*
b. The significance of blood-circulation in retinal differentiation. *Rattus norvegicus (Rodentia)*
c. Mitosis inhibition as a factor of differentiation of the pigment epithelium. *Rana ridibunda, Bufo viridis (Anura), Rattus norvegicus (Rodentia)*
d. Factors of iris and ciliary body differentiation. *Rana temporaria, R. ridibunda (Anura), Rattus norvegicus (Rodentia)*

STRÖM, R. Fil.mag. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Larval development. *(Bryozoa)*

STRÖMBERG, J.-O. Fil.lic. — Dept. of Zool., Univ. of Lund, LUND, Sweden
a. Segmentation, gastrulation and organogenesis. *Cirolana kincaidi, Gnorimosphaeroma oregonensis, Limnoria lignorum, Bopyroides hippolytes, Hemiarthrus abdominalis, Argeia pugettensis (Flabellifera & Epicaridea, Isopoda, Crustacea)*

STRUDEL, G. Dr.ès Sci., M.I.I.E. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
a. Développement du système nerveux orthosympathique. *(Aves)*
b. Développement de la colonne vertébrale. *(Aves)*
c. Rôle inducteur de la chorde et du tube nerveux; chondrogenèse. *(Aves)*

d. Tératologie de la colonne vertébrale. *(Aves)*

STUCHLY, Z. Dr., Prof. — Zakład Biol. Ogólnej, Akad. Med., ul.Bujwida 9, WROCŁAW, Poland

SUBTELNY, S. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA City, Iowa 52240, U.S.A.

a. Nuclear transplantation. *Rana* spp. *(Anura)*

SUCH (RAZIMBAUD), Mrs.J. Dr.Biol.anim. — Lab. de Zool. expér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France

a. Recherches descriptives et expérimentales sur le développement embryonnaire de l'oeil composé. *(Insecta)*

SUGIE, T. — Nat. Inst. of Animal Industry, CHIBA-shi, Japan

SUGINO, H. D.Sc., M.I.I.E., Porf. — Biol. Lab., Osaka Gakugei Univ., Ten-noji-ku, OSAKA, Japan

a. Transplantation experiments. *Dugesia gonocephala (Tricladidea, Turbellaria)*

SUGIYAMA, M. M.A., D.Sc., M.I.I.E., Prof. — Marine Biol. Station, Nagoya Univ., Sugashima-cho, TOBA, Mie-ken, Japan

a. Physiological studies on fertilization and artificial parthenogenesis. *Hemicentrotus pulcherrimus, Pseudocentrotus depressus (Echinoidea)* (in collaboration with M.ISHIKAWA)

SULLIVAN, G.E. M.Sc., Ph.D. — Dept. of Histol. and Embryol., Univ. of Sydney, SYDNEY, N.S.W., Australia

a. Effect of paralysis with curarising agents on the morphogenesis of the wing musculature. *Gallus* spec. *(Aves)*

b. Effect of paralysis on the vertebral column of the embryo. *Gallus* spec. *(Aves)*

c. Electron-microscopy of differentiating muscle and effects of paralysis. *Gallus* spec. *(Aves)*

SUNDARARAJ, B.I. M.Sc., Ph.D. — Dept. of Zool., Univ. of Delhi, DELHI 7, India

a. Physiology of reproduction. *(Pisces; Amphibia)*

SUSSEX, I.M. M.Sc., Ph.D., Prof. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, CONN.06520, U.S.A.

a. Histodifferentiation in tissue cultures. *Eucalyptus camaldulensis (Dicotyledoneae)*

b. Organogenesis in sterile culture. *Eucalyptus camaldulensis (Dicotyledonae)*

SUSSMAN, A.S. Ph.D., Prof. — Dept. of Bot., Univ. of Michigan, ANN ARBOR, Mich., U.S.A.

a. Developmental physiology and genetics of "clock" mutants, and the metabolic control of dormancy in ascospores. *Neurospora crassa (Tetrasperma, Fungi)*

SUSSMAN, M. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass.02154, U.S.A.

a. Genetic and developmental studies. *Dictyostelium* spec. *(Acrasiales)* (in collaboration with R.R.SUSSMAN)

SUSSMAN, R.R. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass. 02154, U.S.A.

a. Genetic and developmental studies. *Dictyostelium* spec. *(Acrasiales)* (in collaboration with M.SUSSMAN)

ŠVEHLOVÁ, Miss M. M.D. — Physiol. Inst., Med. Fac., Charles Univ., Albertov 5, PRAHA 2, Czechoslovakia

a. Unit activity of the respiratory centre during prenatal life. *Gallus* spec. *(Aves)*, *Cavia* spec., *Rattus* spec. *(Rodentia)*

SWANEPOEL, J.H. M.Sc. — Zool Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa

a. Ontogenesis of the sound-conducting apparatus and of the suspensorium. *Breviceps adspersus (Microhylidae, Anura)*

SWANN, M.M. F.R.S., F.R.S.E., Prof. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland

a. Fertilization and cleavage. *(Echinoidea)*
b. Division and growth in micro-organisms.

SWARTZ, G. E. B.A., M.A., Ph.D., Prof. — Dept. of Biol., State Univ. of New York at Buffalo, BUFFALO 14, N.Y., U.S.A.

SZAMBORSKI, J.J. M.D. — II Clinic of Obstetrics & Gynaecol., Med. School Warsaw, ul. Karowa 2, WARSZAWA, Poland

a. Tumours of the mesonephric derivatives in the female genital tract (uterus and ovary). *Homo sapiens (Primates)*
b. Histological and histochemical features of the stroma of the uterine mucosa (normal changes due to age; metaplasia; regenerative processes; malignancy). *Homo sapiens (Primates)*

SZAŃKOWSKA, Miss Z. — Veter. Inst. of Histol. and Embryol., High School of Agricult., Grochowska 272, WARSZAWA, Poland

a. Nucleic acids in development. *Salamandra maculosa (Urodela)*
b. Cytochemical studies on oogenesis. *Salamandra maculosa (Urodela)*

SZÉKELY, G. M.D. — Anat. Dept., Med. Univ., Dischka u 5, PÉCS, Hungary

a. The mechanism of determination of the limb moving segmental apparatus. *Pleurodeles waltlii (Urodela)* (in collaboration with Ch.STRAZNICKY)
b. Developmental organization of the limb moving segments; a series of embryological, histological and neurophysiological studies. *Pleurodeles waltlii, Ambystoma mexicanum (Urodela)*

SZENTÁGOTHAI, J. M.D., Prof. — Anat. Inst., Med. Univ., Tüzolto u.58, BUDAPEST IX, Hungary

TAGUCHI, S. Div. of Biol., Natl. Inst. of Radiol. Scis., Anagawa 4-9, CHIBA, Japan

a. Biochemical studies on effect of radiation on the embryo. *Oryzias latipes (Teleostei)*, *Bufo vulgaris (Anura)*

TAHARA, Y. D.Sc. — Biol., Lab., Osaka Gakugei Univ., Ten-noji-ku, OSAKA, Japan

a. Analysis of congenital malformations. *Meleagris gallipavo (Aves)*
b. Virus-induced malformation. *(Aves)*

TAHMISIAN, T.N. Ph.D. — Div. of Biol. and Med. Res., Argonne Natl. Lab., 9700 South Cass Ave., ARGONNE, Ill. 60440, U.S.A.

a. Effects of ionizing irradiations on tissue differentiation and metabolism in embryos. *Melanoplus diff. differentialis (Orthoptera)*
b. Induction and differentiation of striated muscle (electron microscopy). *Melanoplus diff. differentialis (Orthoptera)*, *Brachydanio rerio, B. albolineatus (Cyprinidae, Teleostei)*

TAKAHASHI, H. M.Sc., D.Sc. — Dept. of Comp. Endocrinol., Inst. of Endocrinol., Gunma Univ., Showa-Machi, MAEBASHI, Japan
- a. Comparative study of the action of hormones on sex differentiation and development of the larval gonad. *Rana* spp., *Xenopus laevis (Anura)*
- b. In vitro cultivation of embryonic, larval and adult gonads. *Xenopus* spec. *(Anura); Triturus* spec., *Pleurodeles* spec. *(Urodela)*

TAKAMI, T. Dr.Agr. — Dept. of Physiol., Sericult.Exper. Station, Koenji, Suginami-ku, TOKYO, Japan

TAKANO, K. M.D. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO, Japan
- a. Susceptibility to teratogenesis of the offspring in maternal alloxan-diabetes. *Mus musculus (Rodentia)*
- b. Teratogenic effects on fetuses of progestogens administered orally to pregnant animals. *Mus musculus (Rodentia)*
- c. Incidence of anomalies in early embryos. *Homo sapiens (Primates)*

TAKASHIMA, R. M.D., Prof. — First Dept. of Anat. and Komatsujima Station for Exper. Biol., School of Med., Tokushima Univ., TOKUSHIMA, Japan

TAKATA, Miss C. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
- a. Immunochemical studies of appearance of lens antigens during lens regeneration. *Triturus viridescens (Urodela)* (in collaboration with J. ALBRIGHT and T.YAMADA)

TAKATA, K. D.Sc., M.I.I.E. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
- a. Analysis of the factors governing growth and differentiation of cells cultured in vitro. *Gallus domesticus (Aves), (Mammalia)*

TAKAYA, H. Ph.D., M.I.I.E., Prof. — Dept. of Biol., Fac. of Sci., Kônan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan
- a. Regional differentiation of the central nervous system. *Triturus* spec., *Hynobius* spec., *Bufo* spec., *Rana* spec. *(Amphibia)*
- b. Chemical phenocopies. *Drosophila melanogaster (Diptera)*
- c. Change of ultrastructure during differentiation of embryonic cells. *(Amphibia)*

TAKEDA, H. M.D., Dr.Med.Sc., Prof. — Dept. of Anat., Kobe Univ. School of Med., Kusunoki-cho 7, Ikuta-ku, KOBE, Japan
- a. Phylogenetic and ontogenetic studies on the cerebellum and inferior olive. *(Vertebrates)*

TAKEUCHI, H. M.Sc. — Dept. of Biol., Fac. of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, OSAKA, Japan
- a. Gonadal differentiation. *Gallus gallus domesticus (Aves)*
- b. Study on the testis-specificity. *Mus musculus (Rodentia)*

TAKEUCHI, K. D.Sc. — Dept. of Biol., Aichi-Gakuin Univ., Chikusa-ku, NAGOYA, Japan
- a. Carotenoid and xanthophore development. *Oryzias latipes (Teleostei)*

TAMANOI, I. Ph.D. — Div. of Radiat. Hazards, Natl. Inst. of Radiol. Scis., 9-1, Anagawa 4, CHIBA, Japan
- a. Modification of inducing agents of guinea pig liver by immunological technique. *(Urodela)*

- b. Studies on the appearance of function in embryonic heart by using micro-electrography. *Gallus domesticus (Aves)*
- c. Morphological and functional effects of radiation on embryos. *Mus musculus (Rodentia)*

TAMBOISE, E. Dr.en Méd., Lic.ès Sci. — Lab. d'Histol., Fac. de Méd. de Paris, 45 Rue des Sts.Pères, PARIS VIe, France

- a. Etude des troubles du développement de l'embryon sous l'action des radiations ionisantes. *Mus rattus (Rodentia)*
- b. Etude des altérations chromosomiques (répartition et type des lésions chromosomiques) chez l'embryon sous l'action des radiomimétiques en fonction de l'organogénèse. *Mus rattus (Rodentia)*
- c. Etude du comportement de certaines cellules nerveuses de l'embryon sous l'action de certaines radiations ionisantes. *Mus rattus (Rodentia)*

TANIMURA, T. M.D. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO. Japan

- a. Mechanism of teratogenicity of thio-TEPA upon the offspring. *Mus musculus (Rodentia)*
- b. Incidence of anomalies in early embryos. *Homo sapiens (Primates)*

TARAYRE (TIBAUTS), Mrs.M.-J. Dr.en Biol.anim. — Lab. de Biol. anim., Fac. des Sci. de Bordeaux, 351 Cours de la Libération, TALENCE (Gironde), France

- a. Experimental study on development of urogenital ducts; influence of sexual hormones. *(Anura)*

TARDENT, P. Dr.Phil., Prof. — Zool.vergl.Anat. Inst., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

TARDIF, B. Prof.agr. — Lab. d'Anat. normale, Ecole Nationale de Médecine, 41 Rue St.Girardin, ROUEN (S.M.), France

- a. Developmental anatomy of limb skeleton. *Homo sapiens (Primates)*
- b. Developmental anatomy of the skull. *Homo sapiens (Primates)*

TARKOWSKI, A.K. M.I.I.E. — Dept. of Embryol., Zool. Inst., Univ. of Warsaw, Krakowskie Przedmiescie 26/28, WARSZAWA 64, Poland

- a. Development of isolated blastomeres. *Mus musculus (Rodentia)*
- b. Analysis of development of chimaeras produced by fusing eggs. *Mus musculus (Rodentia)*

TARTAR, V. B.S., M.S., Ph.D., Prof. — Field Lab., Univ. of Washington, R.1 Box 250, NAHCOTTA, Wash., U.S.A.

- a. Production of decorticaled cells by micrurgical or chemical methods. *Stentor coeruleus, (Ciliata)*
- b. Production of chimeras. *Stentor* spp. *(Ciliata)*
- c. Inter-racial grafts with disharmonies in same. *Stentor coeruleus (Ciliata)*
- d. Amorphic forms in unnutrified cultures. *Stentor coeruleus (Ciliata)*
- e. Causes and means of cell division studied by micrurgy. *Stentor coeruleus, Condylostoma magnum (Ciliata)*

TAYLOR, A.C. B.A., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Anat., The Univ. of Texas Dental Branch, HOUSTON, Tex., U.S.A.

- a. Continuous growth of neurons in the adult retina, studied with H_3 leucine and autoradiography. *Mus musculus (Rodentia)*
- b. Tissue and organ specific cell interactions in development and regeneration

TAYLOR, L.W. Ph.D., Prof. — Dept. of Poultry Husbandry, Univ. of California, BERKELEY 4, Calif., U.S.A.

a. Lethal genes: inheritance, interrelationships and effects of selection. *Gallus gallus (Aves)*

b. O_2 and CO_2 requirements and tolerances in development. *Gallus gallus (Aves)*

TCHELEBI (PAPILLON), Mrs. M. — Lab. d'Evolution des Êtres organisés, Fac. des Sci., 105 Boulevard Raspail, PARIS VIe, France

a. Influence de la température d'incubation sur le polymorphisme larvaire. *Schistocerca gregaria (Acrididae, Orthoptera)*

TENCER, Miss R. Dr.en Sci. — Lab. de Morphol. anim., Univ. libre de Bruxelles, 1850 Chaussée de Wavre, BRUXELLES-Auderghem, Belgique

a. Metabolism during development. *Paracentrotus* spec., *Arbacia* spec *(Echinoidea), Ambystoma* spec., *Pleurodeles* spec. *(Urodela), Bufo* spec., *Rana* spec. *(Anura)*

TESTA-BAPPENHEIM, I. Dr.med.A.O., Prof. — Ist. di Antropol.dell' Univ.di Palermo, Via Archirafi 20-22, PALERMO, Italia

a. Experimental embryology. *Triton alpestris, T. taeniatus (Urodela)*

b. Developmental genetics. *Homo sapiens (Primates)*

c. Developmental pathology. *Homo sapiens (Primates)*

TEULADE, P. Ing.Agron. — Lab. de Zool. expér., Fac. des Sci. de Lyon, Bd. de l'Hippodrome, VILLEURBANNE, France

a. Action des rayonnements sur le développement embryonnaire. *Bombyx mori (Lepidoptera)*

THEILER, K. Dr., Prof. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH, Schweiz

a. Experimentell-genetische Untersuchungen über die Entwicklung der Wirbelsäule. *Mus musculus (Rodentia)*

b. Untersuchungen über Bildung und Differenzierung der Ursegmente. *Gallus domesticus (Aves), Mus musculus (Rodentia)*

c. Untersuchungen über die Kernstruktur während der Organogenese. *Microtus agrestis (Rodentia)* (in Zusammenarbeit mit W.SCHMID)

THIEBOLD J.J. Dr.es Sci. — Inst. océanographique, Jetée Nord, ALGER, Algeria

a. Morphogénèse des gonades et du tractus génital. *(Selachii)*

b. Organogénèse comparée du canal de Müller. *(Vertebrata)*

THIERY, M. M.D., Prof. — Dept. of Obstetr. and Gynecol., Univ.Hosp., De Pintelaan, Gent, Belgium

a. Intrauterine hypoxia. *Mastomys natalensis, Cavia cobaya, Rattus norvegicus (Rodentia), Homo sapiens (Primates)*

THILLARD, Miss M.J. Lic.,Ing.Chim. — Lab. d'Anat. Comp., Fac. des Scis. de Paris, Centre d'Orsay, ORSAY (S. & O.), France

a. Growth of nerve fibres. *Gallus domesticus (Aves)*

b. Development of epiphysis. *Gallus domesticus (Aves)*

THOMAS, R.G. B.Sc.(Hons.), Ph.D., Prof. — Dept. of Bot., Massey Univ. of Manawatu, PALMERSTON NORTH, New Zealand

a. Influence of internal and environmental factors on organogenesis at the stem apex in long-day plants. *Lotus pedunculatus, Dactylis glomerata*

b. Direct observation of patterns and rates of cell division in the stem apex following flower-inducing treatments. *Trifolium repens*

THOMMES, R.C. B.S., M.S., Ph.D., Prof. — Dept. of Biol. Sci., De Paul Univ., 1036 Belden Ave., CHICAGO, Ill.60614, U.S.A.

a. Hypophysectomy effects upon yolk sac membrane metabolism. *Gallus domesticus (Aves)*
b. Quantitative determinations of steroids in the blood of the developing embryo. *Gallus domesticus (Aves)*

THOMPSON, T.E. Ph.D., D.Sc. — Dept. of Zool., Univ. of Bristol, BRISTOL 8, England

a. Comparative embryology. *(Aplacophora; Polyplacophora; Gastropoda)*

THORNTON, C.S. A.B., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Michigan State Univ., EAST LANSING, Mich., U.S.A.

a. Investigation of the effect of subsequent reinnervation, denervation and amputation on aneurogenic limbs, transplanted to normal hosts. *Ambystoma* spec. *(Urodela)*
b. An immunobiological analysis of nerve influence in regeneration. *Ambystoma* spec. *(Urodela)*

THOUVENY, Y.-R. — Lab. de Biol. Anim., Fac. des Sci., 1 Place Victor Hugo, MARSEILLE 3e, France

a. Regeneration. 1. Histological aspects. 2. Effects of X-rays. 3. Tissue culture. 4. Biochemical determination of enzymes. *Polydora flava, Owenia fusiformis (Polychaeta sedentaria), Scoloplos armiger, Magalia perarmata (Polychaeta errantia, Annelida)*

THURMOND, W. A.B., M.A., Ph.D. — Biol. Sci. Dept., California State Polytechnic Coll., SAN LUIS OBISPO, Calif., U.S.A.

a. Physiogenesis of the adeno- and neurohypophysis. *Hyla regilla (Anura)*
b. Melanophore-stimulating activity of the developing brain (transplantation of brain tissue into albino larvae). *Hyla regilla (Anura), Ambystoma tigrinum (Urodela)*

TIBBITTS, F.D. M.A., Ph.D., Prof. — Dept. of Biol. and Lab. of Human Development, Univ. of Nevada, RENO, Nevada, U.S.A.

a. A study of placentation, specifically the histochemistry of the placenta throughout development. *(Heteromyidae, Rodentia)*
b. A study of placental giant cells, using autoradiographic, histochemical and electron microscopical techniques: particularly glycogenesis and glycogenolysis in these cells and also their role in maintenance of the fetal iron pool. *Dipodomys merriami (Heteromyidae, Rodentia)*

TIBERI (MARQUIS), Mrs.J. Lic.es Sci. — Lab. d'Anat. et d'Histol. comp., 7 Quai St.Bernard, PARIS Ve, France

a. Recherches histochimiques sur l'oeuf. *Salmo* spec., *Brachydanio* spec., *Betta* spec. *(Teleostei)*

TIEDEMANN, H. Dr.med., Dr.rer.nat., M.I.I.E., Prof. — Max Planck Inst. f. Meeresbiol., Anton Dohrn Weg, 2940 WILHELMSHAVEN, Deutsche Bundesrepublik

a. Mechanism of embryonic induction. *Triturus* spec. *(Urodela)*
b. RNA-metabolism in early development. *Triturus* spec. *(Urodela)*

TIEDEMANN (WAECHTER), Mrs.H. Dr.rer.nat. — Max Planck Inst. f. Meeresbiol., Anton Dohrn Weg, 2940 WILHELMSHAVEN, Deutsche Bundesrepublik

TIGANO, Miss C. Dr. — Ist. di Zool. dell'Univ., Via Androne 81, CATANIA, Italia
  a. Istologia e citologia delle gonadi. *(Acrididae, Orthoptera)*

TIMMERMANS, Miss L.P.M. M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
  a. Cytochemistry and physiology of shell secretion. *Limnaea stagnalis (Gastropoda)*

TINDALL, A.R. B.Sc., Ph.D. — Coll. of Technol., LEICESTER, England
  a. Descriptive embryology: stages from oothecal deposition to eclosion at 3 days intervals or less. *Periplaneta americana (Dictyoptera)*

TISNA-AMIDJAJA, D. A. Dipl.Biol., Dr.rer.nat. — Dept. of Chemistry and Biol., Inst. of Technol. Bandung, Djl.Ganeca 10, BANDUNG, Indonesia

TITOVA, Mrs.I.I. Cand.biol.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.
  a. Response of the embryos to antigen, antibody and soluble antigen-antibody complexes. *Gallus domesticus (Aves)*

TITSCHACK, H. Dipl.Biol. — Zool. Inst., Techn. Hochschule, DARMSTADT, Deutsche Bundesrepublik

TOBLER. H. Cand.phil. — Zool.-vergl.Anat. Inst., Naturwiss. Fak., Univ. Zürich, Künstlergasse 16, ZÜRICH, Schweiz

TOERIEN, M.J. M.Sc., Ph.D. — Dept. of Anat., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
  — temporarily: Hubrecht Lab. (Internat. Embryol. Inst.), p/a Universiteitscentrum "De Uithof", UTRECHT, Netherlands
  a. Cranial development. *Podiceps cristatus (Podicipitidae, Aves)*
  b. Experimental studies on cranial morphogenesis. *Gallus domesticus (Aves), Chelydra serpentina. (Testudines, Chelonia), Ambystoma punctatum (Urodela)*

TOIT, C.A.du M.Sc., Ph.D., F.R.S.S.Af., M.I.I.E., Prof. — Zool. Inst., fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa

TOIVONEN, S.I. Ph.D., M.I.I.E., Prof. — Lab. of Exp.Embryol., Dept. of Physiol. Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland
  a. The specific action of heterogeneous inductors. *Triturus* spec. *(Urodela)*
  b. The mechanism of primary induction. *Triturus* spec. *(Urodela)* (in collaboration with L.O.SAXÉN and E.T.VAINIO)
  c. Mechanism of kidney tubulogenesis. *Mus musculus (Rodentia)* (in collaboration with L.O.SAXÉN and E.T.VAINIO)

TOKIN, B.P. Dr.Biol.Sci., Prof. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.
  a. Regeneration, asexual reproduction and somatic embryogenesis. *Beroë cucumis, Solinopsis infundibulum (Ctenophora), Pelmatohydra oligactis, Laomedea flexuosa* and other spp. *(Coelenterata)*

TOKIN, I. B. Cand.biol.sci. — Dept. of Embryol., Leningrad Univ., Mendeleevsky St. 5, LENINGRAD, U.S.S.R.

TOMITA, H. B.Sc., M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan
  a. Melanin formation in color phenotypes. *Oryzias latipes (Teleostei)*
  b. Developmental genetics in color mutants. *Oryzias latipes (Teleostei)*

TÖNDURY, G. Dr., M.I.I.E., Prof. — Anat. Inst. der Univ., Gloriastr. 19, 8006 ZÜRICH, Schweiz

a. Viruswirkung auf Embryonen unter Heranziehung der Explantationsmethode mit ganzen Organen. *(Vertebrata), Homo sapiens (Primates)* (in Zusammenarbeit mit J. RICKENBACHER)

b. Elektronenmikroskopische Untersuchungen der Chorionzotten in Zusammenhang mit der Erforschung des Infektionsweges bei Viruserkrankungen in graviditate. *Homo sapiens (Primates)*

c. Organogenese. *Homo sapiens (Primates)*

d. Untersuchungen über den Einfluss radiomimetischer Substanzen auf die Differenzierung der Extremitätenanlagen. *Gallus domesticus (Aves) Mus musculus (Rodentia)* (in Zusammenarbeit mit W. KOCHER, Heiligenberg, Deutsche Bundesrepublik)

TONÉGAWA, Y. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. Epithelio-mesenchymal interaction in the formation of the beak. *Gallus domesticus (Aves)*

TONGE, C. H. M.B., B.S., B.D.S., D.D.Sc., Prof. — Sutherland Dental School, Northumberland Rd., NEWCASTLE upon Tyne 1, England

a. Tooth development and eruption.

TONNEYCK (MÜLLER), Mrs. I. — Anat.Embryol. Inst., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands

a. Experimental studies on the morphogenesis of the skull. *Gallus domesticus (Aves)*

TÖRÖ, I. M.D., Prof. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u.58, BUDAPEST IX, Hungary

a. Experimental and physiological embryology; teratogenesis. *Pleurodeles Waltlii, Ambystoma mexicanum (Urodela), Gallus domesticus (Aves), Rattus rattus (Rodentia)*

TÖRÖK, L. J. C.Sc.B., Ph.D. — Inst. of Histol. and Embryol., Med. Univ., Tüzoltó u.58, BUDAPEST IX, Hungary

a. Regeneration and somatic embryogenesis with special reference to the morphogenetic role of the nervous system. *Dugesia (Euplanaria) lugubris (Turbellaria)*

b. Regeneration, teratogenesis and tumour development. *Dugesia (= Euplanaria) tigrina (Turbellaria)*

TORRÈS (WINTENBERGER), Mrs. S. Lic.ès Sci. — Station Centrale de Physiol. anim., Inst. Natl. de la Recherche Agronomique, C.N.R.Z., JOUY-en-JOSAS (S. et O.), France

a. Etude de la mortalité embryonnaire précoce; étude de l'évolution des oeufs aux premiers stades, dans les conditions normales et avec variation de l'équilibre endocrinien de la mère. *Ovis aries (Artiodactyla)*

b. Etude de la mortalité embryonnaire. *Sus scrofa (Artiodactyla)*

c. Fertilization and development of superovulated eggs. *Ovis aries (Artiodactyla)*

TORREY, Th. W. A.B., A.M., Ph.D., Prof. — Dept. of Zool., Indiana Univ., BLOOMINGTON, Ind., U.S.A.

TOTO, P. D. B.S., M.S., D.D. S., Prof. — Dept. of Oral Pathol., School of Dentistry, Loyola Univ., 1757 W. Harrison St., CHICAGO 12, Ill., U.S.A.

a. Cytogenesis of myoblasts and myotubules in regenerating striated muscle (tracer studies). *Rattus norvegicus (Rodentia)*

TRACY, H. C. Ph.D., Prof.(Emer.) — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas 66045, U.S.A.
— personal address: General Delivery, OXFORD, Miss., U.S.A.

TRAMPUSCH, H. A. L. Ph.D., M.I.I.E. — Div. of exper.Morphol., Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM O., Netherlands

a. Mechanics of the morphogenetic field during regeneration. *Ambystoma mexicanum (Urodela)*
b. Inhibition of regeneration by X-rays and its mechanism. *Ambystoma mexicanum (Urodela)*
c. Regeneration blastemata induced in heterotopic positions and their development. *Ambystoma mexicanum (Urodela)* (in collaboration with Mrs. A. E. HARREBOMÉE)
d. Differentiation and de-differentiation during regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with Mrs. A. E. HARREBOMÉE)
e. Nerve effect on regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with C. D. A. VERWOERD)
f. Effect of X-rays on the pattern of nucleic acids in a regenerate. *Ambystoma mexicanum (Urodela)* (in collaboration with C. D. A. VERWOERD)
g. Tracer studies in the course of regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with A. H. I. NETELENBOS)
h. Studies on the teratogenic effect of anti-metabolites. *Gallus* spec. *(Aves)* (in collaboration with J. N. JAGER)
i. Effect of X-rays on ovarial oogenesis. *Mus* spec. *(Rodentia)* (in collaboration with P. SMIT)

TRINKAUS, J. P. M.A., Ph.D., M.I.I.E., Prof. — Dept. of Biol., Kline Biology Tower, Yale Univ., NEW HAVEN 11, Conn., U.S.A.

a. Differentiation of connective tissue cells (clonal analysis of differentiative specificity and stability). *Gallus domesticus (Aves)*
b. Mechanism of morphogenetic movements. *Fundulus heteroclitus (Teleostei)*

TRIPLETT, E. L. B.A., Ph.D., Prof. — Dept. of Biol. Sci., Univ. of California, SANTA BARBARA, Calif., U.S.A.

TRUCKENBRODT, W. Dr.phil.nat. — Heiligenberg-Inst. 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik

a. Experiments on oogenesis, egg-cleavage and disc-formation. *Kalotermes* spec., *Recticulitermes* spec. and other spp. *(Isoptera)*

TRUMAN D. E. S., B.A., Ph.D. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland

a. Immunochemical studies of lens development. *Xenopus laevis (Anura), Gallus domesticus (Aves)* (in collaboration with J. C. CAMPBELL)

TRUSLOVE, Miss G. M. B.Sc., Ph.D. — Dept. of Genet., Univ. Coll. London, Gower St., LONDON W.C.1, England

a. Developmental genetics of skeletal mutants. *Mus musculus (Rodentia)*

TSCHUMI, P. A. Dr., Prof. — Zool. Inst. der Univ. Bern, Sahlistr. 8, BERN, Schweiz

TUCHMANN-DUPLESSIS, H. M.I.I.E., Prof. — Lab. d'Embryol., Fac. de Méd., 45 Rue des Sts. Pères, PARIS VIe, France
a. Anencéphalie. *Homo sapiens (Primates)*
b. Tératogénèse par sulfamides hypoglycémiants, antimetabolites. *Rattus* spec. *(Rodentia)* (en collaboration avec Mrs. L. MERCIER (PAROT))
c. Influence des hormones sur le développement foetal. *Rattus* spec. *(Rodentia)*
d. Influence des alcaloïdes du Rauwolfia, de la réserpine et de la déserpidine, sur le développement. *Rattus* spec. *(Rodentia)* (en collaboration avec Mrs. L. MERCIER (PAROT)
e. Influence des neuroleptiques sur la fertilité et le développement foetal. *Rattus* spec., *Mus* spec. *(Rodentia), Oryctolagus cuniculus (Lagomorpha)*
f. Diabète expérimental et grossesse. *(Mammalia)*

TUCKER, J. S. Ph.D. — Pacific Marine Station, Univ. of the Pacific, DILLOWS BEACH, Cal. 95204, U.S.A.
a. Reproductive cycles in marine benthic forms; influence of environmental factors and nutrition. *(Polychaeta; Phoronidea; Lamellibranchia)*

TUFT, P. H. M.A., Ph.D., M.I.I.E. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland
a. Embryonic growth: cell number, mass, density, uptake and distribution of water. *Xenopus laevis (Anura)*
b. Effect of morphogenetic inhibitors, e.g. β-mercapto-ethanol.

TUMANISHVILI, G. D. Doct.biol.sci. — Dept. of Biophysics, Inst. of Physics, Acad. of Sci. of the Georgian S.S.R., TBILISI, U.S.S.R.

TUNG, T. C. Dr., M.I.I.E, Prof. — Inst. of Zool., Acad. Sinica, PEKING, Haitien, China

TURBYFILL, Ch. L. B.A., M.A., Ph.D. — Worcester Foundation for Exp. Biol., 222 Maple Avenue, SHREWSBURY, Mass., U.S.A.
a. Effects of irradiation on germ cells and early development. *Mesocricetus auratus (Rodentia)*

TWEEDELL, K. S. B.S., M.S., Ph.D., Prof. — Dept. of Biol., Univ. of Notre Dame, NOTRE DAME, Ind., U.S.A.
a. Role of subcellular particles in differentiation of living marine eggs. *Pectinaria gouldii (Polychaeta)*
b. Inhibition of hydranth regeneration. *Tubularia crocea (Hydroidea)*
c. Renal tumor induction by subcellular fractions in embryonic and larval stages. *Rana pipiens (Anura)*

TWITTY, V. C. Dr., M.I.I.E., Prof. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif., U.S.A.

TYLER, A. Ph.D., M.I.I.E., Prof. — Dept. of Devel.Biol., Div. of Biol., California Inst. of Technol., PASADENA 4, Calif. 91109, U.S.A.
a. Physiology of fertilization. *(Echinoidea)*
b. Physiology of early development. *(Polychaeta; Echinoidea)*
c. Life-span, motility and metabolism of spermatozoa. *(Annelida; Mollusca; Echinodermata; Aves; Mammalia)*
d. Immuno-embryology; developmental immunogenetic analysis of cancer. *(Echinodermata; Mammalia* etc.)
e. Protein biosynthesis during early development. Marine animals *(Echinodermata* etc.)

TYLER, C. D.Sc., Ph.D., F.R.I.C., Prof. — Dept. of Physiol. Chem., the Univ., READING, England
  a. Formation of the egg shell and its membranes in the oviduct. *Gallus domesticus (Aves)*
  b. Structure and properties of the egg shell. *(Aves)*

UBBELS, Miss G. A. M.Sc. — Hubrecht Lab. (Intern.Embryol.Inst.), p/a Universiteitscentrum „De Uithof", UTRECHT, Netherlands
  a. The role played by the follicle cells around the growing oocyte in the ovariotestis. *Limnaea stagnalis, L. peregra (Gastropoda)*
  b. Cytochemistry of oogenesis. *Limnaea stagnalis (Gastropoda)*
  c. Histochemical analysis of neural and mesodermal competence of the ectoderm. *Ambystoma mexicanum (Urodela)* (in collaboration with P. D. NIEUWKOOP)

† UBISCH, L. v. Dr.jur.et phil., M.I.I.E., Prof. (Emer.) — PARADIS, Norway
(deceased)

UCHIDA, T. A. Dr.Agr. — Zool. Lab., Fac. of Agric., Kyushu Univ., FUKUOKA, Japan
  a. Studies on reproduction and embryology. *(Microchiroptera)*

UHER, J. M.D., C.Sc. — Clin. of Obstet. and Gynecol., Postgraduate School of Med., nâbr. K.Marxe 157, PRAHA-Podoli, Czechoslovakia
  a. The chorion in tissue culture (biochemistry). *Homo sapiens (Primates)*

ULLMANN, Miss S. L. B.Sc., Ph.D. — Dept. of Zool., Univ. of Edinburgh, West Mains Road, EDINBURGH 9, Scotland
  a. Comparative ultrastructure of eggs. *(Insecta)*

ULRICH, H. Dr.phil., Prof. — Zool. Inst. der Eidg. Techn. Hochschule, Universitätsstr. 2, ZÜRICH, Schweiz
  a. Action of X-rays on nucleus and cytoplasm of eggs, and on embryonic stages. *Drosophila melanogaster (Diptera)*
  b. Morphology, physiology and cytology of paedogenetic-bisexual reproduction cycle. *Heteropeza pygmaea (= Oligarces paradoxus), Miastor metraloas (Itanididae = Cecidomyidae, Diptera)*

URBANI, E. M.I.I.E., Prof. — Lab. di Istol. ed Embriol., Fac. di Scienze, Univ. di Roma, ROMA, Italia
  a. Biochemistry of embryonic development and of metamorphosis. *(Amphibia)*
  b. Biochemistry of regeneration. *(Invertebrata; Vertebrata)*
  c. Cytochemical and autoradiographic investigations of oogenesis. *Dytiscus* spec. *(Coleoptera)*

URBANI-MISTRUZZI, Mrs. L. Prof.Inc. — Lab. di Istol. ed Embriol., Fac. di Scienze, Univ. di Roma, ROMA, Italia
  a. Biochemistry of regeneration. *Tubularia* spec. *(Hydroidea)*

URSPRUNG, H. Ph.D., Prof. — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.
  a. Biochemical studies on differentiation. *Drosophila melanogaster (Diptera), Rana pipiens, Xenopus laevis (Anura), Mus musculus (Rodentia)*
  b. Organization of imaginal discs. *Drosophila melanogaster (Diptera)*
  c. Ultrastructure and enzymology of fertilization. *Ascidia nigra (Tunicata)*

UWA, H. M.A. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. Haploid formation. *Oryzias latipes (Teleostei)*
b. Tissue culture of embryonic organs. *Oryzias latipes (Teleostei)*

VAAGE, S. M.D. — Anat. Inst., Univ. of Oslo, OSLO, Norway
a. Morphogenetic studies on cell migrations in the central nervous system of the embryo by means of autoradiography. *Gallus domesticus (Aves)*

VACEK, Z. MUDr., Dr.Sc., Prof. — Inst. of Embryol., Fac. of Med., Charles Univ., Albertov 4, PRAGUE 2, Czechoslovakia
a. Electron microscopy and histochemistry of the placenta (comparative studies on the submicroscopic structure, enzyme histochemistry and transport mechanism). *(Rodentia, Carnivora, Insectivora, Chiroptera), Homo sapiens (Primates)*
b. Role of primitive streak and tail region in early differentiation of the body (submicroscopic and cytochemical studies in normal and experimental conditions). *Rana esculenta (Anura), Gallus domesticus (Aves), Mus rattus (Rodentia)*

VAHS, W. Dr.phil., Doz. — Zool. Inst. der Univ., Kerpenerstr. 13, KÖLN-Lindenthal, Deutsche Bundesrepublik
a. Quantitative cytochemistry of the induction processes. *(Pisces; Amphibia; Aves)*
b. The role of the yolk platelets in the differentiation process. *(Urodela)*

VAINIO, E. T. M.D. — Lab. of Exp.Embryol., Dept. of Physiol.Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland
a. Mechanism of the primary induction. *Triturus* spec. *(Urodela)* (in collaboration with S. I. TOIVONEN and L. O. SAXÉN)
b. Mechanism of kidney tubulogenesis. *Mus musculus (Rodentia)* (in collaboration with S. I. TOIVONEN and L. O. SAXÉN)

VAKAET, L. C. M.D., M.I.I.E., Prof. — Lab. of Anat., Fac. of Med., Univ. of Gent, Bylokekaai 1, GENT, Belgium
a. Early development. *Gallus domesticus (Aves)*
b. Fetal and neonatal endocrinology. *Mus musculus albinus (Rodentia)*

VANABLE, J. W., Jr. A.B., Ph.D. — Dept. of Biol.Sci., Purdue Univ., LAFAYETTE, Ind., U.S.A.

VAN ALTEN, P. J. M.S., Ph.D. — Dept. of Anat., Coll. of Med., Univ. of Illinois, 1853 W .Polk St., CHICAGO 12, Ill., U.S.A.
a. Development of the digestive tract. *Gallus domesticus (Aves)*
b. Ontogeny of the immunological mechanism. *Gallus domesticus (Aves)*

VANDEBROEK, G. Dr.Sc., M.I.I.E, Prof. — Lab. d'Embryol., Inst. de Zool., Univ. de Louvain, 59 Rue de Namur, LOUVAIN, Belgique

VANDERHAEGHE (HOUGARDY), Mrs. F. Dr.en Sci. — Station de Zool. expér., Univ. de Genève, Route de Malagnou 154, Chêne-Bougeries, GENÈVE, Suisse
a. Nuclear transplantation. *Xenopus laevis (Anura)*

VANNINI, E. Dr., M.I.I.E., Prof. — Ist. di Zool., Via S. Giacomo 9, BOLOGNA, Italia
a. Experimental analysis of the development of the gonad and Bidder's organ. *Bufo* spec. *(Anura)*
b. Sexual and asexual reproductive cycles and regeneration. *Salmacina incrustans, S. dysteri (Polychaeta)*
c. General study of the problem of the "sex gradient" in various hermaphrodite animals. *(Hydroidea, Tricladidea, Turbellaria; Serpulidae, Polychaeta)*

VASSETZKY, S. G. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Thermosensibility of oocytes and eggs during metaphases of maturation and cleavage divisions. *Acipenser güldenstädti, A. stellatus (Chondrostei), Misgurnus fossilis (Cobitidae, Teleostei)*

VAUPEL, M. R. A.B., Ph.D. — Dept. of Anat., Tulane Univ., NEW ORLEANS 18, La., U.S.A.

VENEZIANO, P. P. M.S., Ph.D. — Dept. of Biol., Illinois Inst. of Technol., CHICAGO 16, Ill., U.S.A.

VENZKE, W. G. D.V.M., M.Sc., Ph.D. — Dept. of Veter. Anat., Ohio State Univ., 1900 Coffey Rd., COLUMBUS 10, Ohio, U.S.A.

a. Morphogenesis and physiology of pineal gland. *(Aves)*
b. Morphogenesis and physiology of blood. *(Aves)*
c. Experimental morphology of pineal gland. *(Bovidae, Mammalia)*

VERDONK, N. H. Ph.D. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands

a. Cell-lineage and head-pattern in normal and Li-treated embryos. *Limnaea stagnalis (Gastropoda)*
b. Cell-lineage and head-pattern in heat-shock treated embryos. *Limnaea stagnalis (Gastropoda)*
c. Determination of bilateral symmetry in the head region. *Limnaea stagnalis (Gastropoda)*

VEREJSKAYA, Miss V. N. Cand.biol.sci. — Filatov Lab. of Exp. Embryol., Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12-a, MOSCOW V-133, U.S.S.R.

a. Cytology and cytogenetics of experimental polyploids in two species and in their hybrids; male meiosis and spermatogenesis; egg maturation; embryogenesis. *Bombyx mori, B. mandarina (Lepidoptera)*
b. Induction of amphidiploidy in interspecific hybrids. *Bombyx mori, B. mandarina (Lepidoptera)* (in collaboration with B. L. ASTAUROV)

VERHOFSTAD, A. J. Med.Drs. — Lab. for Anat. and Embryol., R. K. Univ., Kapittelweg 40, NIJMEGEN, Netherlands

a. Differentiation of epinephrine- and nor-epinephrine-containing cells in the adrenal medulla, studied by histochemical methods. *Mus rattus (Rodentia)*

VERNET, G. — Lab. de Biol. génér., Fac. des Sci., B.P.347, REIMS (Marne), France

a. Regeneration of the eyes. *Lineus ruber (Anopla, Nemertini)*
b. Activity of the brain during regeneraton of the eyes. *Lineus ruber (Anopla, Nemertini)*
c. Action of phenylthiourea on the regeneration of the eyes. *Lineus ruber (Anopla, Nemertini)*

VERNON, G. A. Dr. — Dept. of Chemistry, Univ. Coll. London, Gower St., LONDON W.C.1, England

a. The study of various proteins in the growth of cells in tissue culture. *Gallus domesticus (Aves)* (in collaboration with D. V. BANTHORPE, B. BANKS, and Miss D. M. LAMONT)

VERWOERD, C. D. A. Med.drs. — Div. of exper.Morphol., Dept. of Anat. and Embryol., Univ. of Amsterdam, Mauritskade 61, AMSTERDAM

O., Netherlands

a. Effect of X-rays on the pattern of nucleic acids in the regenerate. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

b. Nerve effect on regeneration. *Ambystoma mexicanum (Urodela)* (in collaboration with H. A. L. TRAMPUSCH)

VIGNAU, Miss J. Dr.Biol.anim. — Lab. de Zool. expér., Fac. des Sci. de Bordeaux, 40 Rue Lamartine, TALENCE (Gironde), France

a. Recherches expérimentales sur la morphogenèse embryonnaire de la tête. *Carausius* spec. *(Orthoptera)*

VILÍMKOVÁ (HABROVÁ), Mrs. V. Dr. — Dept. of Gener. and Exp. Zool., Charles Univ., Viničná 7, PRAHA 2, Czechoslovakia

a. Nucleic acids and subcellular particles in oogenesis and early development. *(Amphibia)* (in collaboration with J. NEDVÍDEK)

VINCENT, W. S. B.S., M.S., Ph.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., Univ. of Pittsburgh, PITTSBURGH 13, Pa., U.S.A.

VINCENTIIS, M. de M.I.I.E., Prof. — Cattedra di Istol. ed Embriol.. Univ. di Camerino, CAMERINO, Italia

VISSER, J. G. J. B.Sc., M.Sc. — Dept. of Zool., Univ. Coll. of Fort Hare, FORT HARE, C. P., Republic of South Africa

a. Ontogeny of the chondrocranium. *Microsaura pumila pumila (Chamaeleontidae, Lacertilia)*

VISSER, M. H. C. M.Sc. — Zool.Inst., Fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa

a. General ontogeny. *Gonaxis gwandaensis (Streptaxidae, Pulmonata)*

VITTORELLI, Miss M. L. Ph.D. — Ist. di Anat. comp., Univ. di Palermo, Via Archirafi 22, PALERMO, Italia

a. Yolk utilization during embryonic development. *Paracentrotus lividus (Echinoidea)*

VIVIEN, J. H. Dr.ès Sci., M.I.I.E., Prof. — Lab. de Zool. et d'Embryol. expér., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France

a. Morphogénèse des gonades et du tractus génital. *(Selachii; Reptilia)*

b. Corrélations neuro-endocrines. *(Pisces; Amphibia; Reptilia)*

c. Différenciation structurale et ultrastructurale de l'épiphyse. *(Pisces; Reptilia)*

VLIEGENTHART, W. E. Drs. — Anat.-Embryol. Lab., State Univ. of Utrecht, Janskerkhof 3A, UTRECHT, Netherlands

a. Analysis of morphological development by studies of the effects of colchicine. *Mus musculus (Rodentia)*

VOGE, Mrs. M. Ph.D., Prof. — Dept. of Med. Microbiol. and Immunol., School of Med., Univ. of California, LOS ANGELES, Calif. 90024, U.S.A.

a. Cytologic studies on the embryo. *Hymenolepis diminuta, H. citelli (Cestodes)*

b. Differentiation and growth of the embryo to the fully developed cysticercoid (cell typing and cell counts at different stages to determine the ultimate fate of the different types of cells originally present in the embryo). *Hymenolepis diminuta, H. citelli (Cestodes)*

VOLKOVA, Miss L. S. Cand.med.sci. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.
  a. Immunological factors in the pathogenesis of haemolytic disease in newborns. *Papio hamadryas, Macaca* spec., *Homo sapiens* and other spp. *(Primates)*
  b. An experimental model of haemolytic disease. *Rattus norvegicus (Rodentia), Papio hamadryas, Macaca* spec. and other spp. *(Primates)*

VOLPE, E. P. Ph.D., Prof. — Dept. of Biol., Tulane Univ., NEW ORLEANS, La. 70118, U.S.A.

VOY, A. Dr.ès Sci. — Lab. de Zool. et Biol. anim., Fac. des Sci., POITIERS, Vienne, France

VRIES, B. J. de M.Sc. — Zool. Inst., fac. of Sci., Univ. of Stellenbosch, STELLENBOSCH, Republic of South Africa
  — Dept. of Zool., Univ. Coll. of the Western Cape, BELLVILLE, C. P., Republic of South Africa
  a. Development of the gential system. *Helix aspersa (Pulmonata, Gastropoda)*

VSEVOLODOV, E. B. Cand.biol.sci. — Dept. of Embryol., Fac. of Biol., Moscow Univ., MOSCOW V-234, U.S.S.R.
  a. Using some methods of experimental ophthalmology (induced retinal degeneration, experimental cataractogenesis) to analyse the nature of the lens polarity, its stability in normal conditions and its instability (posterior lens epithelium migration and differentiation) in pathology. *Oryctolagus cuniculus (Lagomorpha)*
  b. Experiments to study the role of extralenticular factors contributing to the restoration of adult lens polarity in the course of regeneration or regulation. *Oryctolagus cuniculus (Lagomorpha)*

VYASOV, O.E. Dr.Med.Sci., M.I.I.E., Prof. — Inst. of Exper. Biol., Acad. of Med. Sci. of the U.S.S.R., Baltiyskaya 8, MOSCOW A-315, U.S.S.R.
  a. The formation and localization of organ- and stage-specific proteins (antigens). *(Vertebrata)*
  b. Study of interrelations between organs of mother and fetus.
    1. Study of development of lungs and thyroid glands in fetuses after extirpation of parts of the same organs in the mother. *Rattus norvegicus (Rodentia)*
    2. Study of antibodies to stage-specific antigens in maternal blood. *Homo sapiens (Primates)*

WADA, S. Dr.rer.nat. — Zool. Inst., Univ. Würzburg, Röntgenring 10, 87 WÜRZBURG, Deutsche Bundesrepublik
  a. Developmental physiology. *Tachycines* spec. *(Orthoptera), (Arthropoda)*

WADDINGTON, C. H. Sc.D., F.R.S., M.I.I.E., Prof. — Inst. of Animal Genet., Univ. Dept. of Genet., King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
  a. Study of certain features of developing embryos by electronmicroscopy. *(Diptera; Amphibia)* (in collaboration with Miss M. M. PERRY)
  b. Development of imaginal buds. *Drosophila* spec. *(Diptera)* (in collaboration with Mrs. E. ROBERTSON (PATON)
  c. Ultrastructural changes during growth. *Micrasterias thomasiana (Desmidioidea, Conjugales)* (in collaboration with Miss M. M. PERRY)
  d. Electron microscope studies of mutants. *Drosophila* spec. *(Diptera)* (in

collaboration with Miss M. M. PERRY)
- e. Types of RNA synthesized in early embryonic tissues. *(Amphibia)* (in collaboration with Mrs. E. PERKOWSKA (MOSER)

WAELSCH, Mrs. S. GLUECKSOHN Ph.D., M.I.I.E., Prof. — Dept. of Genetics, Albert Einstein Coll. of Med., Eastchester Road and Morris Park Ave., NEW YORK, Bronx, N.Y. 10461, U.S.A.
- a. Developmental physiology. *Mus musculus (Rodentia)*
- b. Developmental genetics. *Mus musculus (Rodentia)*
- c. Developmental pathology. *Mus musculus (Rodentia)*

WAL, U.P. van der M.Sc. — Zool. Lab., State Univ. of Utrecht, Janskerkhof 3, UTRECHT, Netherlands
- a. Nucleic acid and protein-synthesis during early development, studied by the electron-autoradiographic technique. *Limnaea stagnalis (Gastropoda)*

WALASH, M.N. B.Sc., — Dept. of Zool., Fac. of Sci., Ain Shams Univ., Abassia, CAIRO, Egypt
- a. Studies on regeneration in tadpoles. *Bufo regularis (Anura)*
- b. Effect of some pharmacological and other chemical substances on regeneration of tadpoles. *Bufo regularis (Anura)*

WALKER, B.E. B.Sc., M.Sc., Ph.D., Prof. — Dept. of Anat., Med. Branch, Univ. of Texas, GALVESTON, Tex., U.S.A.
- a. Development of secondary palate. *Mus musculus (Rodentia)*
- b. Embryology of cortisone induced cleft palate. *Mus musculus (Rodentia)*
- c. Effects on fetal development of mechanically altering the fetal environment. *Mus musculus (Rodentia)*
- d. Some histochemical observations on embryonic mesenchyme. *Mus musculus (Rodentia)*
- e. Radioautographic study of interkinetic nuclear migration in the neural tube. *Gallus domesticus (Aves)*
- f. The lethal effect of cortisone on embryos with spontaneous cleft lip — cleft palate. *Mus musculus (Rodentia)*
- g. Effects of transplantation on the histogenesis of transitional epithelium. *Mus musculus (Rodentia)*
- h. Radiation injury resulting from nuclear labeling with tritiated thymidine in the embryo. *Gallus domesticus (Aves)*
- j. Effects of hypervitaminosis A on palate development in two strains. *Mus musculus (Rodentia)*
- k. Abnormal palate morphogenesis in embryos induced by riboflavin deficiency. *Mus musculus (Rodentia)*
- l. Radioautographic study of cell migrations in embryos with thymidine-H^3. *Mus musculus (Rodentia)*
- m. Changes in amniotic sac fluid after administration of teratogens. *Mus musculus (Rodentia)*
- n. Cleft palate caused by triamcinolone. *Mus musculus (Rodentia)*

WALLACE, H. M.A., D.Phil. — Dept. of Biol., Amherst College, AMHERST, Mass., U.S.A.
- a. Developmental genetics and nucleolar metabolism. *Xenopus laevis (Anura)*
- b. Developmental physiology. *(Ascidiae)*

WALLACE, R. A. Ph.D. — Biol. Div., Oak Ridge National Lab., P. O. Box Y, OAK RIDGE, Tenn., U.S.A.

a. Biochemical studies on vitellogenesis (hormonal mechanism of protein synthesis, intercellular protein transport, isotope and immunofluorescent techniques). *(Crustacea; Vertebrata)*

WALLEY, Miss L. J. — Marine Science Labs., Univ. Coll. of North Wales, MENAI BRIDGE, Anglesey, Wales

a. Histological studies on metamorphosis. *(Cirripedia, Crustacea)*

WARD, R.J. B.Sc., Ph.D., F.R.I.C., M.I. Biol. — Reckitt & Sons, 160 Dansom Lane, HULL, England

a. The teratogenic effects of drugs; testing of drugs for foetal toxicity. *(Mammalia)*

WARKANY, J. M.D., M.I.I.E., Prof. — Children's Hosp. Res. Found., Div. of Teratol., Elland and Bethesda Avenues, CINCINNATI, Ohio 45229, U.S.A.

a. Chromosomal studies of tissues of embryos rendered abnormal by teratogenic agents. *Rattus norvegicus albinus (Rodentia)*

b. Pituitary-adrenal relations in fetuses rendered abnormal by teratogens. *Rattus norvegicus albinus (Rodentia)*

c. Experimental production of congenital malformations by streptonigrin. *Rattus norvegicus albinus (Rodentia)*

WARTENBERG, H. Dr.med. — Anat. Inst. der Univ., Univ.-Krankenhaus Eppendorf, Martinistr. 52, HAMBURG 20, Deutsche Bundesrepublik

WARTIOVAARA, J.J. M.D. — Lab. of Exp.Embryol., Dept. of Physiol. Zool., Univ. of Helsinki, Arkadiankatu 7, HELSINKI, Finland

a. The electron microscopy of kidney tubulogenesis in vitro. *Mus musculus (Rodentia)*

WATANABE, H. Ph.D. — Inst. of Zool., Tokyo Kyoiku Univ., Otsuka-Kubomachi 24, Bunkyo-ku, TOKYO, Japan

a. Colony-specificity and selective fertilization in compound forms. *(Botryllus primigenus (Ascidia)* (in collaboration with H. OKA)

WATANABÉ, T. Dr. — Dept. of Biol., Fac. of Sci., Kônan Univ., Okamoto, Motoyama-cho, Higashi-nada-ku, KOBE, Japan

a. Change of ultrastructure during differentiation of embryonic cells. *(Amphibia)*

WATERMAN, Allyn J. B.A., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Biol., Williams Coll., WILLIAMSTOWN, Mass., U.S.A.

a. Development of structure and function of the thyroid, hypophysis, and neuro-secretory system. (higher *Vertebrata)*

b. Function of the thyroid gland. *Eptatretus stouti (Myxinoidea, Cyclostomata)*

c. Limb regeneration and prolactin. *Diemyctylus viridescens (Urodela)*

WATTERSON, R. L. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Illinois, URBANA, Ill., U.S.A.

WATTS, G. T. Ch.M., F.R.C.S. — Dept. of Surgery, Queen Elizabeth Hosp., Edgbaston, BIRMINGHAM 15, England

a. Origin of cells in healing wounds.

b. Relation of regeneration to reactions of immunity.

c. Nature of wound healing in relation to components involved and responsible (mucopolysaccharides and collagen).

WAYMOUTH, C. — The Jackson Lab., BAR HARBOR, Me., U.S.A.

a. Development of Na-K activated ATPase in kidney and lung, in vivo and in vitro. *Mus musculus (Rodentia)*

WEAKLEY (SHAW), Mrs. B. A.B., A.M., Ph.D. — Dept. of Anat., Queen's Coll., DUNDEE, Scotland

a. Fetal and neonatal chromaffin tissue: electron microscopy, light and electron histochemistry, light and electron autoradiography. *Oryctolagus cuniculus (Lagomorpha)*

b. Fine structure of the ovary: fetal, post-natal and adult. *Mesocricetus auratus (Rodentia)*

WEBER, A. M.I.I.E., Prof. (Emer.) — Lab. de Neurohistol., Inst. d'Anat., Fac. de Méd., Univ. de Genève, 20 Rue de l'Ecole de Méd., GENÈVE, Suisse

—private address: 3 Quai du Mont Blanc, GENÈVE, Suisse

WEBER (GAUTIER), Mrs. H. — Lab. d'Anat. et d'Histol. comp., 7 Quai St. Bernard, PARIS Ve, France

WEBER, R. Ph.D., M.I.I.E., Prof. — Dept. of Cell Biol. and Chem. Embryol., Zool. Inst., Univ. of Bern, Sahlistr. 8, BERN, Switzerland

a. Biochemistry of tail atrophy during metamorphosis. *Xenopus laevis (Anura)*

b. Distribution of acid hydrolases in regressing tail tissues. *Xenopus laevis (Anura)*

c. Ultrastructural changes in regressing tail muscle at metamorphosis. *Xenopus laevis (Anura)*

d. Primary effects of thyroxine on larval tails. *Xenopus laevis (Anura)* (in collaboration with F. HEINEMANN)

e. Polymorphism of mitochondria in "mosaic embryos".

WEBER, W. Dr.rer.nat., Priv.Doz. — Inst. f. vergl. Tierphysiol. der Univ., Kerpenerstr. 15, KÖLN-Lindenthal, Deutsche Bundesrepublik

a. Entwicklung und Funktion des neurosekretorischen Systems. *(Amphibia)*

WEBSTER, G. C. B.Sc., Ph.D. — Dept. of Zool., King's Coll., Strand, LONDON W.C. 2, England

a. Regeneration, regulation and pattern formation. *Hydra* spec. *(Hydroidea)*

WECHSLER, W. Dr.med. — Max-Planck-Inst. f. Hirnforsch., Abt.f. Allg. Neurol., Ostmerheimerstr. 200, KÖLN-Merheim, Deutsche Bundesrepublik

a. Elektronenmikroskopische Untersuchung der Zyto- und Histogenese des Nervensystems. *Gallus domesticus (Aves)*

WĘGLARSKA, Miss B. D.Sc. — Zool. Dept., Jagiellonian Univ., ul. Krupnicza 5 KRAKOW, Poland

a. Histochemical studies on development. *Melasoma populi (Coleoptera)* (in collaboration with Cz.JURA and A.KRZYSZTOFOWICZ)

b. Spermatogenesis. *Quadraspidiotus ostreaeformis (Homoptera, Rhynchota)*

WEGMANN, R. Dr. en Méd., Dr.ès Sci., Lic.ès Lettres — Inst. d'Histochimie Méd., 45 Rue des Sts. Pères, PARIS VIe, France

a. Enzymology and metabolic pathways of morphogenesis.

WEHRMAKER, A. Dr.rer.nat. — Dept. of Biol., Dalhousie Univ., HALIFAX, N.S., Canada

WEISHEIT-SCHULTZ, Mrs. P. B.A., M.S., Ph.D. — Dept. of Biol., Denver Center, DENVER, Colo., U.S.A.
  a. Cytochemical study of the effect of Triton WR-1339 upon the visceral epithelium of the yolk sac placenta. *Mus norvegicus albinus (Rodentia)*
  b. Effect of teratological and other deleterious compounds upon the maintenance of pregnancy with especial reference to cytochemical and ultrastructural changes in placental cells. *Mus norvegicus albinus (Rodentia)*

WEISS, P. A. Ph.D., M.D. (Hon.c.), M.I.I.E., Prof. — Office of the Dean, Graduate School of Biomed. Sci., Hermann Professional Bldg, Suite 238, HOUSTON, Tex. 77025, U.S.A.

WEISS, R. A. B.Sc. — Dept. of Anat. and Embryol., Univ. Coll. London, Gower St., LONDON W.C.1, England
  a. Investigations of the morphology and behaviour of fibroblasts and their transformation in vitro by infection with Rous sarcoma virus. *Gallus domesticus (Aves)*

WEISZ, P. B. B.S., Ph.D. — Dept. of Biol., Brown Univ., PROVIDENCE 12, R.I., U.S.A.

WELANDER, A. D. B.S., M.S., Ph.D., Prof. — Lab. of Radiat. Biol., and Coll. of Fisheries, Univ. of Washington, SEATTLE, Wash. 98105, U.S.A.
  a. Effects of graded sublethal doses of X-rays on several different stages of the embryo. *Oncorhynchus kisutch, O. tshawytscha, Salmo gairdnerii (Teleostei)*
  b. Experimental embryology. *Salmo gairdnerii, Oncorhynchus kisutch, O. tshawytscha (Teleostei)*

WELLS, L. J. Ph.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., Univ. of Minnesota, MINNEAPOLIS, Minn. 55455, U.S.A.
  a. Growth of fetal pancreas in vitro. *Mus musculus (Rodentia)*
  b. Pregnancy and experimental diabetes. *Rattus norvegicus (Rodentia)*

WENCLEWSKI, A. Ph.D. — Dept. of Neurol., Med. Acad., Przybyszewskiego 49, POZNAŃ. Poland
  a. The activity of aryl sulphate sulphohydrolase during the development of the nervous system.

WENDER, M. B. M.D. — Dept. of Neurol., Med. Acad., Przybyszewskiego 49, POZNAŃ, Poland
  a. The chemical composition of developing nervous tissue, with special reference to the period of myelination.
  b. The influence of ionizing radiation on the developing nervous system.
  c. The influence of asphyxia on the developing nervous system.

WENGER, B. S. B.S., M.S., Ph.D. — Dept. of Comp. Biochem. and Physiol, Univ. of Kansas, LAWRENCE, Kansas 66045, U.S.A.

WENGER, Mrs. E. L. B.A., M.A., Ph.D. — Dept. of Comp. Biochem. and Physiol., Univ. of Kansas, LAWRENCE, Kansas 66045, U.S.A.

WENIGER, J.-P. Dr.ès Sci. — Lab. de Zool. et d'Embryol. expér., Fac. des Sci., Univ. de Strasbourg, 12 Rue de l'Université, STRASBOURG, France
  a. Associations d'organes embryonnaires de même espèce et d'espèces différentes en culture in vitro; gonades. *(Aves; Mammalia)*
  b. Nature chimique des hormones sexuelles embryonnaires (test d'Allen et Doisy; chromatographie gaz-liquide). *Gallus gallus (Aves), Mus*

musculus (Rodentia)

WENSING, C. J. G. D.V.M., Ph.D. — Veter. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands

a. Development of the conducting system in the heart. *Sus scrofa (Artiodactyla)*

b. The conducting system in hearts with congenital malformations. *Sus scrofa (Artiodactyla)*

WERNER, Y. L. M.Sc., Ph.D. — Dept. of Zool., Univ. of Jerusalem, JERUSALEM, Israel

a. Development, especially vertebral column; tail regeneration. *(Gekkonidae, Lacertilia)*

WESSELLS, N. K. Dr. — Dept. of Biol. Sci., Stanford Univ., STANFORD, Calif., U.S.A.

a. Induction and cytodifferentiation in pancreatic exocrine cells. *Mus musculus (Rodentia)*

b. Epidermal-dermal interactions in relation to histogenesis and to feather germ and limb formation. *(Aves)*

WESTON, J. A. B.A., Ph.D. — Dept. of Biol., Developm. Biol. Center, Western Reserve Univ., 2127 Cornell Road, CLEVELAND, Ohio 44106, U.S.A.

a. The migration and differentiation of neural crest cells. *Gallus domesticus (Aves)*

b. The cell surface as an effector of cell specificity. *Gallus domesticus (Aves)*

c. The action of morphogenetic agents on embryonic cell behavior in vivo and in vitro. *Gallus domesticus (Aves)*

WETHERBEE, D. K. B.A., M.A., Ph.D., Prof. — Dept. of Forestry and Wildlife Biol., Univ. of Massachusetts, AMHERST, Mass., U.S.A.

a. Ancestors and embryos; relationship between ontogeny and phylogeny. *(Aves)*

b. Inhibition of reproductivity. *(Aves)*

WEYGOLDT, P. Dr., Priv.Doz. — I. Zool. Inst. der Freien Univ. Berlin, Königin-Luise-Str. 1-3, BERLIN-Dahlem, Deutsche Bundesrepublik

a. Comparative embryology, with special reference to morphology and evolution of the embryonic membrane and the pumping organ. *Cheiridium muscorum, Lasiochernes pilosus (Cheliferinea), Neobisium muscorum (Neobisiinea), Chthonius tetrachelatus (Chthoniinea, Pseudoscorpiones, Arachnoidea)*

b. Reproduction (reproductive behavior, sperm transfer, form of spermatophore, morphology of spermatozoon). *Cheiridium muscorum, Lasiochernes pilosus (Cheliferinea), Neobisium muscorum (Neobisiinea), Chthonius tetrachelatus (Chthoniinea, Pseudoscorpiones, Arachnoidea)*

WHITE, R. H. Ph.D. — Dept. of Biol. Sci., Purdue Univ., LAFAYETTE, Ind., U.S.A.

WHITELEY, A. H. Ph.D., M.I.I.E., Prof. — Dept. of Zool., Univ. of Washington, SEATTLE 5, Wash., U.S.A.

WHITING, H. P. M.A., Ph.D. — Dept. of Zool., Univ. of Bristol, BRISTOL 8, England

a. Development of the nervous system and behaviour pattern. *Scylliorhinus canicula, Petromyzon fluviatilis, Salmo* spp. *(Pisces)*

b. Embryological development. *Heptranchias* spec., *Hexanchus* spec. *(Notidanidae, Selachii)*
c. Development of the pelvic girdle. *(Anura)*

WHITTAKER, J. R. B.A., M.Sc., Ph.D. — Dept. of Zool., Univ. of California, LOS ANGELES 24, Calif., U.S.A.
a. Biochemical analysis of differentiation and metaplasia of embryonic eye tissues cultured in vitro. *Gallus domesticus (Aves)*
b. Melanin biosynthesis and cell regulatory mechanisms in differentiating pigment cells. *Ciona intestinalis, Styela* spec. *(Ascidiae), Gallus domesticus (Aves)*
c. Charaterization of specific gene expression by primary and established cell cultures.

WIDERSTEN, B. Fil.mag. — Zool. Inst., Univ. of Uppsala, UPPSALA, Sweden
a. Larval development. *(Scyphozoa)*

WIERTZ (HOESSELS), Mrs. E. L. M. J. Ph.D. — Veter. Anat. and Embryol. Inst., State Univ. of Utrecht, Bekkerstr. 141, UTRECHT, Netherlands
a. Photographical series of normal development. *Gallus domesticus (Aves)*
b. Photographical series of organ development. Domestic animals *(Mammalia)*
c. Histochemical determinations in embryos. Domestic animals *(Mammalia)*
d. Development of peripheral vegetative nervous system. Domestic animals *(Mammalia)*

WIGGLESWORTH, V. B. Dr., M.I.I.E., Prof. — Dept. of Zool., Univ. of Cambridge, Downing St., CAMBRIDGE, England
a. Mode of action of growth hormones. *Rhodnius prolixus (Triatomidae, Hemiptera)*

WILD, A. E. B.Sc., Ph.D. — A.R.C. Unit of Embryol., Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
a. Protein composition of the maternal and foetal fluids at different stages of pregnancy. *Oryctolagus cuniculus (Lagomorpha)*

WILDE, C. E., Jr. A.B., M.A., Ph.D., M.I.I.E., Prof. — Dept. of Histol. and Embryol., School of Dental Med., Univ. of Pennsylvania, 4001 Spruce St. PHILADELPHIA, Pa. 19104, U.S.A.
a. Organogenesis in vitro (limb bud, gills, cranial neural crest). *Ambystoma maculatum (Urodela)*
b. Cellular differentiation (pigment cell; ectomesenchyme). *Ambystoma maculatum (Urodela)*
   1. causal biochemistry of cellular differentiation.
   2. differentiation of cytoplasmic fragments.
c. Morphology and causal biochemistry of striated muscle differentiation. *Ambystoma maculatum (Urodela)*
d. Electrophoresis of molecular constituents of specific embryonic anlagen and cell types; fraction recovery and tissue culture of embryonic cells in the presence of selected fractions. *Ambystoma maculatum (Urodela)*
e. Cytochimeras in tissue culture from disaggregated cells of embryos of different classes. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*
f. Role of probablistic processes in cellular differentiation. *Gallus* spec. *(Aves), Mus* spec. *(Rodentia)*

g. Ontogeny of proteins and amino acids. *Fundulus heteroclitus (Teleostei)*
h. The energy pathways of differentiating systems. *(Vertebrata)*
i. Informational macromolecules in early development and differentiation. *(Echinodermata, Vertebrata)*

WILDE, A. G. de M.D., Ph.D., Prof. — Dept. of Anat. and Embryol., State Univ. of Groningen, Oostersingel 69, GRONINGEN, Netherlands
a. Development of palatal shelves; a descriptive morphological and experimental study. *Rattus norvegicus albinus (Rodentia)*

WILDE, J. de Ph.D., Prof. — Lab. of Entomol., Agricult. Univ., Binnenhaven 7, P.O.B. 62, WAGENINGEN, Netherlands
a. Endocrine control of diapause and reproduction. *Leptinotarsa decemlineata (Coleoptera)*
b. Photoperiodic control of endocrines. *Leptinotarsa decemlineata (Coleoptera)*

WILENS, Miss S.W. A.B. — Dept. of Biol. (Osborn Memorial Lab.), Yale Univ., NEW HAVEN, Conn.06520, U.S.A.
a. The movements of the entoderm in early stages studied with the use of vital dyes. *(Urodela)*
b. Development of the gut and associated structures. *Ambystoma punctatum (Urodela)*

WILLIAM, Miss N. B.Sc. — Dept. of Zool., Ain Shams Univ., Fac. of Sci., Abassia, CAIRO, Egypt
a. Experimental studies on early developmental stages. *Bufo regularis (Anura)*

WILLIAMS, Mrs. M. LYMAN B.S., M.D. — Dept. of Pediatrics, School of Med., Univ. of Pennsylvania, PHILADELPHIA 4, Pa., U.S.A.
a. Investigation of water uptake and extrusion by mitochondria of fetal animals. *Rattus rattus (Rodentia)*
b. Investigation of fatty acid composition of adipose tissue throughout gestation. *Homo sapiens (Primates)*

WILLIAMS, N. Ph.D., Prof. — Dept. of Zool., Univ. of Iowa, IOWA City, Iowa 52240, U.S.A.
a. Morphogenesis. *Tetrahymena* spec. *(Holotricha, Ciliata)*

WILLIER, B. H. B.S., Ph.D., Sc.D., M.I.I.E., Prof. (Emer.) — Dept. of Biol., Johns Hopkins Univ., Charles and 34th Sts., BALTIMORE, Md. 21218, U.S.A.
a. Histochemical study of the yolk sac membrane, a living transitory organ in which yolk substances are metabolized and/or transported to the growing embryo via the blood circulation. *Gallus* spec. *(Aves)*
b. Ultrastructure of entodermal cells of yolk-sac membrane. *Gallus* spec. *(Aves)*

WILLISON-BARFORD, Mrs. J. B.Sc. — Plant Physiol. Div., Dept. of Scientific and Industrial Research, PALMERSTON NORTH, New Zealand
a. Effect of gibberellins and other growth substances on growth and flowering. *Mimulus cardinalis*
b. Hormone and nutrient requirement of vegetative and florally induced tissues. *Hyoscyamus niger, Xanthium pensylvanicum, Mimulus cardinalis, Ipomaea batatas*

WILSON, I. B. B.Sc., Ph.D. — Dept. of Zool., Univ. Coll. of North Wales, BANGOR, Caernarvonshire, Wales
- a. Investigations on the establishment of implantation and early pregnancy *Mus musculus (Rodentia)*

WILSON, J. G. B.A., M.A., Ph.D., Prof. — Dept. of Anat., Coll. of Med., Univ. of Florida, GAINESVILLE, Fla., U.S.A.
- a. Interaction of two or more teratogenic agents. *Rattus rattus albinus (Rodentia)*
- b. The effect of teratogenic agents with known mechanisms of action. *Rattus rattus (Rodentia)*

WILSON, J. W. Ph.D., Prof.(Emer.) — Arnold Biol. Lab., Brown Univ., PROVIDENCE 12, R.I., U.S.A.

WILT, F. H. Ph.D., Prof. — Dept. of Zool., Univ. of California, BERKELEY, Calif., U.S.A.
- a. Mechanism of thyroxin-stimulated visual pigment conversion during metamorphosis. *(Anura)*
- b. Mechanism of origin of hemoglobin-synthesizing machinery during development. *Gallus domesticus (Aves)*
- c. Activation of protein and RNA synthesis in cleaving eggs. *Strongylocentrotus purpuratus (Echinoidea)*

WIMSATT, W. A. A.B., Ph.D., M.I.I.E., Prof. — Dept. of Zool., Cornell Univ., ITHACA, N.Y. 14850, U.S.A.
- a. Comparative placentation, structural and functional. *(Reptilia; Mammalia)*
- b. Ultrastructural analysis of sperm-uterus relationship, sperm, oocytes and fertilized ova. *Myotis lucifugus (Microchiroptera)*

WINGSTRAND, K. G. Dr.phil., Prof. — Inst. of Comp. Anat., Universitetsparken 3, COPENHAGEN Ø, Denmark
- a. Embryology. *Armillifer* spec. *(Linguatulida)* (in collaboration with A. NØRREVANG)

WISCHNITZER, S. B.A., M.S., Ph.D., Prof. — Dept. of Biol., Yeshiva Univ., 186 St. and Amsterdam Ave., NEW YORK, N.Y. 10033, U.S.A.
- a. Electron microscopic study of oogenesis. *Triturus viridescens (Urodela), Gallus domesticus (Aves), Mus albicans (Rodentia)*

WITKAM, W. G. M. Med.Drs. — Lab. for Anat. and Embryol., R.K. Univ., Kapittelweg 40, NIJMEGEN, Netherlands
- a. Experimental hypoplasia of the cerebellum induced by X-rays. *Mus rattus, Cavia porcellus (Rodentia)*

WITSCHI, E. Ph.D., M.D.L.c., M.I.I.E., Prof. — Anat. Inst. der Univ., Pestalozzistr. 20, BASEL, Schweiz
- a. Embryology of hermaphroditism. *Homo sapiens (Primates)*
- b. Atresia in the ovary. *Homo sapiens (Primates)*
- c. Biochemistry of sex determination and sex differentiation. *Xenopus* spec. *(Anura)*

WITTIG, M. — Abt.f.Entw.physiol.der Haustiere, Max-Planck-Inst.f.Tierzucht u. Tierernährung, 3051 MARIENSEE, Deutsche Bundesrepublik
- a. Analysis of embryonic muscle up to its function. *Oryctolagus cuniculus (Lagomorpha)*

WOELLWARTH, C. v. Dr.phil., M.I.I.E. — Heiligenberg-Inst., 7799 HEILIGENBERG, Baden, Deutsche Bundesrepublik

a. Autonome Musterbildung in der Medullarplatte. *(Amphibia)*
b. Determination der Kopforgane. *(Amphibia)*
c. Entstehung von Situs inversus durch Defekte und verschiedene äussere Einflüsse. *(Urodela)*

WOERDEMAN, M. W. M.D., D.Sc., Ph.D., M.I.I.E., Prof. (Emer.) — Botticellistr. 10, AMSTERDAM Z.2, Netherlands
a. Lens regeneration. *(Aves; Mammalia)*
b. Development of specific substances during induction and regeneration. *(Amphibia; Aves)*

WOLFF, Et.C. Dr.ès Sci., M.I.I.E., Prof. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France
a. Recherches expérimentales sur l'embryologie et la tératologie; monstres simples, monstres doubles et poly-embryonie. *(Aves)*
b. La différenciation sexuelle, par les méthodes de greffes, de castration, d'injections d'hormones et d'explantations; différenciation normale et inversion sexuelle des gonades, des voies génitales et des caractères somatiques précoces. *Gallus* spec. *(Aves)*
c. Problèmes relatifs à la régénération; origine des cellules de régénération et processus d'induction dans la régénération. *Polycelis nigra, Euplanaria lugubris (Turbellaria), Triturus cristatus (Urodela)*
d. Recherches sur la différenciation in vitro des caractères sexuels embryonnaires (gonades, canaux de Müller etc.) et de différents organes; besoins nutritifs des organes en culture en milieux synthétiques. *(Amniota)*
e. Culture in vitro de longue durée de tumeurs malignes en présence et en l'absence d'organes embryonnaires. *Homo sapiens (Primates)* (en collaboration avec Mrs.Em.WOLFF (HENNIG))
f. Recherches sur la différenciation et l'intersexualité in vitro et in vivo des gonades embryonnaires. *(Aves)* (en collaboration avec Mrs. K. E. STENGER (HAFFEN))

WOLFF (HENNIG), Mrs. Em. Dr.ès Sci., M.I.I.E. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France
a. Organotypic culture of human cancer tumors taken directly from the patient; long term organotypic culture; culture on embryonic mesonephros; culture on extracts of mesonephros and yeast. *Gallus gallus (Aves), Homo sapiens (Primates)*

WOLPERT, L. B.Sc., D.I.C., Ph.D. — Dept. of Zool., King's Coll., Strand, LONDON W.C. 2, England
a. Cellular basis of morphogenesis and pattern formation. *Hydra* spec. *(Hydroidea), Psammechinus miliaris (Echinoidea)*

WOLPOW, E. R. B.A., M.D. — Sect. on Exper. Embryol., Lab. of Neuroanat. Sci., N.I.N.D.B., Natl.Insts. of Health, BETHESDA, Md.20014, U.S.A.

WOLSKY, A. Dr.phil., M.I.I.E., Prof. — Biol. Lab., Fordham Univ., NEW YORK, Bronx, N.Y. 10458, U.S.A.

a. Tissue homotransplantation (skin, internal organs, embryonic tissues) *Triturus viridescens (Urodela)*
b. Effect of anti-metabolites and antibiotics (especially actinomycin) on development and regeneration. *Paracentrotus lividus, Arbacia punctulata (Echinoidea), Triturus viridescens, Rana pipiens (Amphibia)*
c. The effect of X-ray and long wave ultraviolet irradiation of gametes, alone and in combination with actinomycin treatment, on early development and regeneration. *Arbacia punctulata, Lytechinus pictus, Diadema atra (Echinoidea), Triturus viridescens, Rana pipiens (Amphibia)*
d. A re-investigation of the influence of neurogenesis on the development of the compound eye. *Bomyx mori (Lepidoptera)*

WOOLLAM, D. H. M. M.A., M.D., Sc.D. — Anat. School, Univ. of Cambridge, CAMBRIDGE, England
a. Teratology. *(Mammalia)*

WOYKE, J. Dr., Dozent habil. — Bee Lab., Agricultural Coll., Ursynów, WARSZAWA 25, Poland
a. Developmental genetics; sex determination and development of diploid drones. *Apis mellifica (Hymenoptera)*

WRATHALL, A. E. B.Sc., M.C.V.S. — A.R.C. Poultry Research Centre, King's Buildings, West Mains Rd., EDINBURGH 9, Scotland
a. Analysis of chemically induced abnormalities in development. *(Aves)*

WRBA, H. Dr.med., Dr.rer.nat., Prof. — Inst. für exp. Pathol., Deutsches Krebsforschungszentrum, Stiftung des Öffentlichen Rechts, Berliner Str. 29, 69 HEIDELBERG, Deutsche Bundesrepublik
a. Stoffwechsel in vitro. *(Rodentia)*
b. Eihautbildung und Differenzierung in vitro. *(Rodentia)*
c. Heterotransplantation von Tumoren. *(Rodentia)*
d. Missbildungen explantierter Keime. *(Rodentia)*

WRÓBLEWSKI, R. Dr.med., Prof. — Dept. of Gener. Biol., Silesian Acad. of Med., Rokitnica, ZABRZE 8, Poland
a. Regeneration of the thyroid gland. *Cavia cobaya (Rodentia)*
b. Cytological and histochemical investigations on the regenerating tail. *Xenopus laevis (Anura)*

WU, Ching-Keong B.Sc. — Dept. of Anat. and Histol., Univ. of Adelaide, ADELAIDE, S. Austr., Australia
a. Homografting of foetal tissues (experimental morphology). *Rattus rattus albinus (Rodentia)*

WURMBACH, H. Dr., Prof. — Entwicklungsgeschichtl.Abt., Zool. Inst. der Univ., Poppelsdorfer Schloss, 53 BONN, Deutsche Bundesrepublik
a. Beeinflussung des Wachstums und der Differenzierung durch Wirkstoffe (Schilddrüsenhormon, Steroide, Thymuswirkstoffe). *Lebistes* spec., *Xenopus laevis, Bufo bufo, Gallus domesticus (Vertebrata)*
b. Formbildende Kräfte beim Wachstum (Wachstumsdynamik); formbildende Bedeutung der Gewebe. *Bufo* spec., *Xenopus laevis (Anura), Gallus domesticus (Aves)*

WYATT, G. R. B.A., Ph.D., Prof. — Dept. of Biol., Gibbs Research Lab., Yale Univ., NEW HAVEN 11, Conn., U.S.A.

a. Biochemistry of metamorphosis; particularly the roles of nucleic acids, and the regulation of carbohydrate metabolism. *Hyalophora cecropia (Lepidoptera, Saturniidae)*

WYTTENBACH, C. R. A.B., M.A., Ph.D. — Dept. of Anat., Univ. of Chicago, CHICAGO 37, Ill., U.S.A.

a. Ontogeny of molecular specificity in the central nervous system. *Gallus domesticus (Aves)*
b. Gross and molecular changes during development and ageing of hydranths. *Campanularia flexuosa (Hydroidea)*

XAVIER MORATO, M.J. Prof. — Inst. de Histol. e Embriol., Fac. de Med., Avenida Professor Egaz Moniz, LISBOA 4, Portugal

a. Histogenesis of the area postrema. *Felis catus (Carnivora)*
b. Histogenesis of the neurohypophysis, at microscopical and ultrastructural level. *Felis catus (Carnivora)*

YADA, M. M.D. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO, Japan

a. Relationship between maternal alloxan-diabetes and teratogenesis. *Mus musculus (Rodentia)*

YAJIMA, H. M.A. — Biol. Inst., Fac. of Arts and Sciences, Ibaraki Univ., Watari, MITO, Ibaraki Pref., Japan

a. Comparison of embryonic development between normal and malformed embryos by serial sections of fixed material. *Chironomus dorsalis (Diptera)*
b. Malformations induced by irradiation with monochromatic ultraviolet light. *Chironomus dorsalis (Diptera)*

YAMADA, T. M.S. — Div. of Biol., Natl. Inst. of Radiol. Scis., Anagawa 4-9, CHIBA, Japan

a. Biochemical studies on effect of radiation on the embryo. *Oryzias latipes, (Teleostei), Bufo vulgaris (Anura)*

YAMADA, T. D.Sc., M.I.I.E., Prof. — Biol. Div., Oak Ridge National Lab., P.O.Box Y, OAK RIDGE, Tenn., U.S.A.

a. Immunochemical studies of appearance of lens antigens during lens regeneration. *Triturus viridescens (Urodela)* (in collaboration with J. ALBRIGHT and C.TAKATA)
b. The pattern of macromolecular synthesis in embryonic induction. *Triturus pyrrhogaster (Urodela)* (in collaboration with S.K.BRAHMA)
c. Base composition of nuclear and cytoplasmic RNA during lens regeneration. *Triturus viridescens (Urodela)*
d. Culture in vitro of lens regenerate. *Triturus viridescens (Urodela)*

YAMADORI, T. M.D. — Dept. of Anat., Kobe Univ. School of Med., Kusunoki-cho 7, Ikuta-ku, KOBE, Japan

a. Developmental study of the central nervous system. *Homo sapiens (Primates)*

YAMAGAMI, K. B.Sc., M.A., D.Sc. — Biol. Inst., Coll of Gen. Education, Univ. of Tokyo, Komaba, Meguro-ku, TOKYO, Japan

a. Phosphorus metabolism in eggs (embryonic nutrition of phosphorus during development). *Oryzias latipes, Salmo gairdnerii irideus (Teleostei)*

b. Regional differences in the ^{32}P-incorporation activity in embryos. *Salmo gairdnerii irideus (Teleostei)*

YAMAMOTO, K. M.Sc., D.Sc., Prof. — Lab. of Fresh-water Fish Culture, Dept. of Biol., Fac. of Fisheries, Hokkaido Univ., HAKODATE, Japan

a. Histo-physiological studies of oogenesis. *(Teleostei)*
b. Electron microscopical studies of oogenesis. *(Teleostei)*
c. Studies on the hormones of reproduction. *(Teleostei)*

YAMAMOTO, T. D.Sc., M.I.I.E., Prof. — Biol. Inst., Fac. of Sci., Nagoya Univ., Chikusa-ku, NAGOYA, Japan

a. On the mechanism of fertilization and activation. *Oryzias latipes (Teleostei)*
b. Artificial induction of functional sex-reversal. *Oryzias latipes (Teleostei)*
c. Developmental genetics. *Oryzias latipes (Teleostei)*
d. Sex determination and sex reversal. *Carassius c. auratus, C.c. langsdorfii (Teleostei)*

YAMAMOTO, T.S. M.Sc., D.Sc. — Dept. of Zool., Fac. of Sci., Hokkaido Univ. North 8, West 5, SAPPORO, Japan

a. Cytochemical investigation on development. *(Teleostei)*

YAMAMURA, H. M.D. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO, Japan

a. Antigenic molecules with esterase activity contained in the embryo. *Homo sapiens (Primates)*
b. Organ culture of the limb bud. *Mus musculus (Rodentia)*

YAMAMURA, S. M.D. — Japan Dental Pathol. and Embryol. Res. Inst., c/o Yamamura Dental Office, No.12 Higashi-Ichi-Bancho, SENDAI Japan

a. Development of teeth, alveolar wall, lateral frenulum, enamel knot, primary cement, and palate (studies conducted on large numbers of embryos and infants, length 0.3 - 70 cm). *Homo sapiens (Primates)* (in collaboration with other members of the staff)

YAMANA, K. M.Sc., D.Sc. — Dept. of Biol., Fac. of Sci., Kyushu Univ., FUKUOKA, Japan

a. Nucleic acid metabolism in developing embryos. *Rana japonica, Xenopus laevis (Anura)*
b. Teratogenic effects on developing embryos of some nucleic acid-base analogues. *Xenopus laevis (Anura)*

YANAGISAWA, T. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

a. Phosphagens in egg and spermatozoa. *(Echinodermata)*
b. Ion exchange and paper chromatographic studies on the nature of the acid-soluble nucleotides in the egg and their changes during development. *Hemicentrotus* spec., *Anthocidaris* spec., *Pseudocentrotus* spec. *(Echinoidea); Asterias* spec., *Asterina* spec. *(Asteroidea)*
c. Phosphagen and guanidine phosphoryltransferase in spermatozoa. *(Mammalia)*

YANG, W.T. B.S., M.S. — Inst. of Marine Sci., Univ. of Miami, 1 Rickenbacker Causeway, MIAMI, Fla.33149, U.S.A.

a. Larval and juvenile development of some forms from the Western Atlantic. *(Oxyrhyncha, Decapoda, Crustacea)*

b. Larval and juvenile development. *Bathynectes superba (Portunidae, Decapoda, Crustacea)*

YASUDA, M. M.D. — Dept. of Anat., Kyoto Univ., Sakyo-ku, KYOTO, Japan

a. Effects of antimetabolites upon the embryonic development. *Mus musculus (Rodentia), Coturnix coturnix japonica (Aves)*

b. Incidence of anomalies in early embryos. *Homo sapiens (Primates)*

YAZAKI, Miss I. M.A. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

a. Physical studies on the contractile proteins from eggs. *Hemicentrotus pulcherrimus (Echinoidea)*

b. Immunological staining for localization of proteins. *(Echinoidea)*

YNTEMA, C.L. Ph.D., M.I.I.E., Prof. — Dept. of Anat., School of Med., State Univ. of New York, 766 Irving Ave., SYRACUSE 10, N.Y., U.S.A.

a. Regeneration of aneural limbs. *Ambystoma punctatum (Urodela)*

b. Development of the visceral skeleton. *Gallus domesticus (Aves)* (in collaboration with W.S.HAMMOND)

c. Stages in embryonic development. *Chelydra serpentina (Chelonia)*

YONEDA, M. Ph.D. — Embryol. Section, Dept. of Biol., Fac. of Sci., Tokyo Metropolitan Univ., Setagaya-ku, TOKYO, Japan

a. Mechanical properties of egg cells during cleavage. *(Echinodermata)*

YOSHIKURA, M. D.Sc. — Dept. of Biol., Fac. of Sci., Kumamoto Univ., Kurokami-machi, KUMAMOTO, Japan

YOUNG, B.A. M.B., B.S., Ph.D. — Anat. Dept., London Hosp. Med. Coll., Turner St., LONDON E.1, England

a. Fine structure of foetal thyroid. *Homo sapiens (Primates)*

b. Fine structure of placenta. *(Cervidae, Phocidae)*

YOUNG, W. C. Ph.D., Prof. — Dept. of Anat. and Zool., Univ. of Kansas, 102a Haworth Hall, LAWRENCE, Kansas 66045, U.S.A.

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ZAAIJER, Miss J.J.P. Ph.D., M.I.I.E. — Lab. for Cell biol. and Histol., Fac. of Med., State Univ., Rijnsburgerweg 10, Boerhaavekwartier, LEIDEN, Netherlands

a. Limb development (organ culture). *(Vertebrata)*

b. Development of hormonal activity of gonads and adrenal glands during embryogenesis (organ culture). *(Vertebrata)*

ZABIŃSKI, J. M.Sc. — Dept. of Exper. Zool., Polish Acad. of Sci., ul. Kopernika 7, KRAKÓW, Poland

ZAFFAGNINI, F. Dr. — Ist. di Zool., Via S.Giacomo 9, BOLOGNA, Italia

a. Cytochemical and electron microscopical study of the nurse-cells and oocyte differentiation. *Daphnia magna (Cladocera)*

b. Endocrine centres, growth, moulting and gametogenesis. *Daphnia magna (Cladocera)*

ZAFIRATOS, K. Dipl.sc.nat. — Zool. Lab. and Museum, Univ. of Athens, Panepistimiopolis (Kouponia), ATHENS (621), Greece

a. Notochord implants into the developing and regenerating hind limb of tadpoles. *Bufo bufo, B. viridis, Rana ridibunda (Anura)*

ZAHND, P.J.J. Dr.en Méd., Lic. ès Sci. — Inst. d'Embryol., Fac. de Méd., 1 Place de l'Hôpital, STRASBOURG, France
- a. Formation de l'oeuf; physiologie; ultrastructure. *(Pisces; Reptilia; Aves)*
- b. Organogénèse (ultrastructure) du pancreas. *Gallus domesticus (Aves)*
- c. Maturation in the central nervous system, with special reference to the visual area and the motor nuclei of the myelencephalon (electron microscopy). *Oryctolagus cuniculus (Lagomorpha)* (in collaboration with J. E. GRUNER)
- d. Study of cultured embryonic tissues (liver, heart muscle; organotypic and histiotypic) submitted to different drugs (steroid hormones particularly); electron microscopy. *Gallus domesticus (Aves)* (in collaboration with J.V.RUCH)
- e. Embryology of thymic tissue (electron microscopy). *(Rodentia)*

ZAMBONI, L. M.D. — Dept. of Pathol., Harbor General Hosp., TORRANCE, Calif., U.S.A. — Dept. of Pathol., UCLA School of Med., LOS ANGELES 24, Calif., U.S.A.
- a. Electron microscope studies on the embryonic meso- and metanephros. *Homo sapiens (Primates)*
- b. Electron microscope studies on the embryonic hemopoietic organs. *Homo sapiens (Primates)*
- c. Electron microscope studies on fertilization processes. *(Mammalia)*

ZAVANELLA, Miss T. Dr.Biol.Sci. — Catt. di Anat. comp., Univ. di Milano, Via Celoria 10, MILANO, Italia
- a. Induction of tumors; tumorigenic activity of acellular extracts and of nucleic acids from these tumors. *Triturus cristatus (Urodela)*

ZEILMAKER, G.H. — Netherlands Cancer Inst., Sarphatistr. 108, AMSTERDAM, Netherlands
- a. Endocrine aspects of blastocyst-implantation. *Rattus norvegicus (Rodentia)*

ZELENÁ (TOPIČOVÁ), Mrs.J. MUDr., C.Sc. — Lab. of Electr. Microsc., Inst. of Physiol., Czechoslovak Acad. of Scis., Flemingovo n.2, PRAHA 6, Czechoslovakia
- a. Development of stretch-receptors in muscles with an augmented nerve supply. *Rattus norvegicus (Rodentia)*
- b. Stretch-receptors in regenerating muscles. *Rattus norvegicus (Rodentia)*
- c. Development of acytylcholinesterase activity in muscles during the foetal and early postnatal stages. *Rattus norvegicus (Rodentia)*

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ZERBIB, C. Dipl. d'Etudes Sup. — Lab. de Génét. évolutive du C.N.R.S., GIF-sur-Yvette (S. et O.), France
- a. Contrôle endocrinien de la différenciation sexuelle. *Lithobius forficatus (Chilopoda)*

ZEUTHEN, E. Dr.phil., M.I.I.E., Prof. — Biol. Inst. of the Carlsberg Foundation, 16 Tagensvej, COPENHAGEN N, Denmark

ZILLER (SENGEL), Mrs.C. Lic.ès Sci. — Inst. d'Embryol. et Tératol. expér. du C.N.R.S., 49bis Avenue de la Belle Gabrielle, NOGENT sur Marne (Seine), France

— Lab. d'Embryol. expér. du Coll. de France, 11 Place Marcelin Berthelot, PARIS Ve, France

a. Mise au point d'une technique de culture in vitro d'organes et de tissus en voie de régénération, en adaptant la méthode de Et.C.Wolff et K.Haffen. *Dugesia lugubris (Turbellaria)*

b. Etude des conditions de la régénération du pharynx; influence sur cette régénération d'extraits de divers tissus et organes. *Dugesia lugubris, D. tigrina, Polycelis nigra (Turbellaria)*

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a. Histochemistry of the nidation process. *Oryctolagus cuniculus (Lagomorpha)*

b. Ontogeny of enzymes during embryonic development. *(Mammalia)*

ZOTIN, A.I. Dr.biol.sci. — Inst. of Animal Morphol., Acad. of Sci. of the U.S.S.R., Vavilov St. 12, MOSCOW V-133, U.S.S.R.

a. Mechanism of cytokinesis in the cleavage of eggs. *Strongylocentrotus droebachiensis (Echinoidea), Acipenser güldenstädti (Chondrostei), Ambystoma mexicanum (Urodela)*

b. Energetics of development. *Strongylocentrotus droebachiensis (Echinoidea), Acipenser güldenstädti (Chondrostei), Ambystoma mexicanum (Urodela)*

c. Thermodynamics of development. *Strongylocentrotus droebachiensis (Echinoidea), Acipenser güldenstädti (Chondrostei), Ambystoma mexicanum (Urodela)*

ZWAAN, J. M.D., Ph.D. — Dept. of Anat., School of Med., Univ. of Virginia, CHARLOTTESVILLE, Va., U.S.A.

a. Analysis of protein synthesis during induction and differentiation of the lens. *Gallus domesticus (Aves)*

b. Teratogenicity of drugs, and in particular of alkylating agents. *Gallus domesticus (Aves)*

ZWILLING, E. Ph.D., F.I.I.E. — Dept. of Biol., Brandeis Univ., WALTHAM, Mass.02154, U.S.A.

a. Disaggregation and reaggregation of early embryos; effects on differentiation. *Gallus domesticus (Aves)*

b. Culture behaviour of early embryonic tissues. *Gallus domesticus (Aves)*

c. Ectoderm-mesoderm interaction in limb development. *Gallus domesticus (Aves)*

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with Members engaged in Developmental Biology

(geographical order)

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* GORDON, H. P. Asst. Instr. (Pathol.)
* HEBARD, C. N. Grad. stud. (Biol.)
* STOCUM, D. L. Grad. stud. (Biol.)
* MASLOW, D. Grad. stud. (Biol.)
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* GWATKIN, R. B. L. Asst. Prof.
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* BRINSTER, R. L. Instr. (Physiol.)
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* GLASSER, S. R. Assoc. Prof.
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* LAHIRI, D. Res. Fellow
* CHAKRAVARTY, A. Res. Fellow
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* EGAMI, N. Head Biol. Div.
* ETOH, H. Res. off.
* FUJII, R. Res. off.
* HYODO, Miss Y. Res. off.
* IWASAKI, Miss T. Res. off.
* MURAMATSU, S. Res. off.
* NAKAZAWA, T. Res. off.
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SUBJECT INDEX

(alphabetical order)

Although the Index is intended to be self-explanatory, some introductory remarks may be useful.

The Index is composed of headings (large capitals) and entries (small print and small capitals). In general, an attempt has been made to start the entries with the most informative word, but it was impossible to avoid that entries sometimes start with an adjective of a rather unspecific character, such as: comparative, descriptive, experimental; abnormal, normal; early, late. Such entries are easily overlooked in a search for specific information, particularly in the longer sections.

Since virtually all the material in this index refers to developmental processes, the word *"development"* is usually omitted from the entries (not from the headings). Words like "differentiation", "egg", "embryo" etc. are usually retained. The more or less synonymous phrases "action of/on-", "effect of/on-", and "influence of/on-" are all retained in the entries. Other frequently occurring phrases are "role in/of-" and "relation to/with-". Prepositions very seldom figure as the first word of an entry (except in the phrase "in vitro"); where they do, they are found at their proper place in the alphabet.

In order to increase the efficiency of the Index, special care has been devoted to *cross-references*. Moreover, research subjects have been brought under *as many headings as possible* (e.g. *under a discipline, an organ, a technique, and a substance)*. This of course leads to a certain amount of redundant information, but it is felt that this is outweighed by the greater chance for the user of finding a particular subject he is interested in.

For various reasons it is impossible to provide a separate taxonomic index. Those who are looking for work on a *specific taxonomic group* are advised to start with the headings of a general nature, such as "Asexual reproduction", "Development", "Embryology", "Life Cycles", "Metamorphosis", "Morphogenesis", "Regeneration", "Reproduction", etc. Genus and species names are not used in the entries, with the exception of the designation *Homo* for the human species.

All the work on *plants* (*including cellular slime molds* etc.) is brought together under one heading: "Plant embryology & morphogenesis (experimental & physiological)".

In the case of work carried out jointly by two or more investigators, *all collaborators* are listed in alphabetical order. Since *initials of first names* are omitted from the entries, it may sometimes be necessary to check two or more investigators of the same surname in the Directory of Names.

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—, lampbrush chromosomes, nucleolus, nucleoplasm, *Amphibia*	MILLER
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ELECTROPHYSIOLOGY
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— —, *Invertebrata, Vertebrata*	AUSTIN
— —, *Primates*	BUTLER
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Gastropoda	BEDFORD
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Homoptera	SANDER
Hydroidea	BRIEN
Hydrozoa	BOUILLON
	NAGAO
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	IVANOVA
	KRAUSE
Invertebrata	HAYNES
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Lacertilia	DUFAURE
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Lamellibranchiata	OLDFIELD
Lepidoptera	MIYA
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Mammalia	DEGENHARDT
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— —, *Aves*	WIERTZ
— —, *Chelonia*	YNTEMA
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—, *Insecta*	COLOMBO
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— —, *Invertebrata, Vertebrata*	AUSTIN
— —, *Mammalia*	BISHOP
— —, relations with uterus & corpus luteum, *Artiodactyla*	MOOR
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— — external physical factors, *Aves, Rodentia*	NEBEL
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— — early embryonic environment on later development, *Rodentia*	McLAREN
— — external factors, *Orthoptera*	BLONDHEIM
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— — kations, *Gastropoda*	GEILENKIRCHEN
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EMBRYONIC FLUIDS

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EMBRYONIC MEMBRANES (& fluids)

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— —, development & regression, *Aves*	FRASCHINI
— — membrane, endoderm, ultrastructure, *Aves*	WILLIER
— — —, functional histochemistry, *Aves*	WILLIER
— —, metabolism, effect of hypophysectomy, *Aves*	THOMMES
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— —, — — sex differentiation, *Crustacea*	CHARNIAUX
— —, ultrastructure, *Crustacea*	MEUSY
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ENTEROCHROMAFFIN CELLS

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—, into anterior eye chamber, *Rodentia* LEVAK
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—, *Rodentia* MAY
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larval organs, growth, *Urodela* HEATH
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— — chick embryo mesonephros, *Homo* WOLFF
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— — yeast & mesonephros extracts, *Homo* WOLFF
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— — subcellular fractions, embryonic & larval stages, *Anura* TWEEDELL
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— — regenerating systems, *Amphibia* RUBEN
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— — embryo, *Diptera* YAJIMA
— — —, *Hymenoptera* AMY
— — limb development & regeneration, *Urodela* BUTLER
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—, structure, experimental modification, *Rodentia* NEBEL
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—, electron microscopy, histochemistry, *Aves, Mammalia, Reptilia* LIERSE
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— — induction, gastrula, *Urodela* REYSS
— — metabolism, embryonic organs in vitro, *Aves* KIRRMANN
— — mitotic activity, *Aves* LULLINI
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— — regeneration, nucleic acids, *Urodela* TRAMPUSCH
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— — —, *Polychaeta* CRESP
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Communications from the Hubrecht Laboratory

I Information booklet

An illustrated information booklet concerning the Hubrecht Laboratory has been prepared. It was sent to more than 1,000 institutes and individual embryologists in all parts of the world in January 1966. All institutes listed in the 10th main issue of the "General Embryological Information Service" have received at least one copy, and institutes newly listed in the present issue will also receive one shortly. The booklet contains a description of the new building, and surveys of the Laboratory's history, its international and research activities, and the facilities it offers to guests from all countries.

Special chapters are devoted to the scientific staff and its research projects, to the Central Embryological Collection, and to the Central Embryological Library. Consequently, no special attention will henceforth be paid to these topics in the "General Embryological Information Service".

Investigators who are unable to use the booklet present in their institute, or who have moved to another institute, but wish to possess a copy, may apply for it; however, the supply is limited. A reprint from the booklet, which particularly concerns the Central Embryological Library and its extensive reprint collection, is also available on request.

II The international team project

The *fifth international research team* met at the new Hubrecht Laboratory from February 1st till July 31st, 1965. Its central topic was: *"Organogenesis in vertebrate embryos"*. The team worked under the guidance of the Director and of several staff members of the Laboratory. During the first eight weeks a series of 13 seminars on organogenesis and related subjects was held, in which all the team members and the entire staff participated.

The team consisted of the following participants:

Miss R. Czołowska, M.Sc. (Warsaw, Poland)
R. Hirakow, M.D. (Tokyo, Japan)
I. A. Niazi, Ph.D. (Jaipur, India)
A. K. Ray, M.Sc. (Calcutta, India)
G. Reynaud, M.Sc. (Marseille, France)
Mrs. Z. Štefanová, Ph.D. (Prague, Czechoslovakia)
Miss M. Švehlová, M.D. (Prague, Czechoslovakia)

Four other scientists who had applied for the team were unable to come.

The sixth team will in all probability meet in 1968. The topic on which it will work has not yet been decided upon. A circular pertaining to this team will be distributed in the fall of 1966.

III Foreign guests

Apart from the international research team, two foreign guests stayed at the Laboratory in 1965. Dr. L. M. Knopp from Seattle, Wash., came in January and stayed until August. He studied neuro-embryological techniques, particularly organ culture of the central nervous system. Prof. P. L. Risley from Eugene, Oregon, stayed at the Laboratory from July till September to study the Collection and the Library.

IV Semi-centenary of the Hubrecht Laboratory

In 1966 the Laboratory will celebrate its 50th anniversary. Plans are being made to hold a two-day Conference on this occasion. Attendance to this Conference will chiefly be limited to Dutch scientists.

V The Central Embryological Library

Please see the information booklet mentioned sub I.

VI The Central Embryological Collection

Please see the information booklet.

VII The Photographic Copying Service

Please see the information booklet.

Communications of the „Institut International d'Embryologie"

(Embryological Section of the I.U.B.S.)

The I.I.E. announces with deep regret the death of three of its emeritus members, C. H. Heuser (January 1965), D. Hooker (June 1965) and L. von Ubisch, and of one of its members, G. ten Cate (February 1966).

The Board of the I.I.E. has accepted the following new members in 1965:

F. Beck, Cardiff
S. K. Brahma, Oak Ridge, Tenn.
Y. Croisille, Nogent sur Marne
M. A. DiBerardino, Philadelphia, Pa.
T. A. I. Grillo, Ibadan
W. G. Heim, Detroit, Mich.
W. Kocher, Heiligenberg
U. Kocher-Becker, Heiligenberg
G. G. Robertson, Memphis, Tenn.
K. Sander, Freiburg i. Brsg.

The present composition of the Board and the latest membership list are to be found in the "General Embryological Information Service", Supplement to the 10th issue (1964).

The procedure for the application for membership and for the acceptance of new members is as follows:
a) Candidates for membership can be proposed by two members at any time. The Board screens the applications once a year, and decides about acceptance by simple majority of votes among its members.
b) The requirement for membership is that the candidate should have made a substantial contribution to the field of developmental biology. The Board decides whether a particular applicant meets this standard.

The next General Assembly and International Congress will be held in France in 1968. The topic of the Congress will be *"Nucleo-cytoplasmic interactions in development"*.

The Adjunct Secretary-treasurer,
P. D. Nieuwkoop

Announcements of recently published books on development and related subjects

General

1. ALTMAN, Ph. L. and D. S. DITTMER (Edit.), 1964 — Biology data book
2. ASDELL, S. A., 1964 — Patterns of mammalian reproduction (2nd edit.)
3. BRACHET, J. and A. E. MIRSKY (Edit.), 1964 — The cell (vol. 6)
4. GEORGE, F. H., 1965 — Cybernetics and biology
5. GOODWIN, B. C., 1963 — Temporal organization in cells; a dynamic theory of cellular control processes
6. MAYER, W. V. and R. G. van GELDER (Edit.), 1965 — Physiological mammalogy (vol. 2, Mammalian reactions to stressful environments)
7. NALBANDOV, A. V., 1964 — Reproductive physiology; comparative reproductive physiology of domestic animals (2nd edit.)
8. PAUL, J., 1965 — Cell and tissue culture (3rd edit.)
9. QUASTLER, H. †, 1964 — The emergence of biological organization
10. SERRA, J. A., 1965 — Modern genetics (vol. 1)

Instruction

11. CHANTURISHVILI, P., 1963 — Animal embryology and pre-embryonic ontogeny
12. EBERT, J. D., 1965 — Interacting systems in development
13. MOORE, J. A., 1963 — Heredity and development
14. RUGH, R., 1964 — Vertebrate embryology
15. STARCK, D., 1965 — Embryology (2nd revised edit.)

Research

16. ABERCROMBIE, M. and J. BRACHET (Edit.), 1964 — Advances in morphogenesis (vol. 4)
17. BELL, E. (Edit.), 1965 — Molecular and cellular aspects of development
18. DeHAAN, R. L. and H. URSPRUNG (Edit.), 1965 — Organogenesis
19. GOSS, R. J., 1964 — Adaptive growth
20. JINKS, J. L., 1964 — Extrachromosomal inheritance
21. KOROTCHKIN, L. I., 1965 — Differentiation and ageing of vegetative neurons
22. LEVANDER, G., 1964 — Induction phenomena in tissue regeneration
23. LOPASHOV, G. V. and O.G. STROEVA, 1964 — Development of the eye
24. MOORE, J. A. (Edit.), 1964 — Physiology of the amphibia
25. MÜLLER, H. G., 1964 — Der Zelleiweiszstoffwechsel während der Nidation, Plazentation und Keimentwicklung (Blasto-, Embryo- und Fetogenese)

26. NEEDHAM, A. E., 1964 — The growth process in animals
27. ROSENBAUM, R. M. and F. ROSSI, 1964 — Enzyme (Handbuch der Histochemie, vol. 7), part 4: Intrazelluläre Lokalisation der Enzyme; Enzyme bei der Ontogenese
28. SCHERF, H., 1964 — Die Entwicklungsstadien der Mitteleuropäischen Curculioniden; Morphologie, Bionomie, Ökologie
29. SCHRÖDER, V. N., 1965 — Physiology and biochemistry of the origin and control of sex in animals
30. THOMAS, J. A. (Edit.), 1965 — Les cultures organotypiques
31. WAGENEN, G. van and M. E. SIMPSON, 1965 — Embryology of the ovary and testis; Homo sapiens and Macaca mulatta
32. WILLMER, E. N. (Edit.), 1965 — Cells and tissues in culture; methods, biology and physiology (vols. 1 and 2)
33. WILSON, J. G. and J. WARKANY (Edit.), 1965 — Teratology; principles and techniques
34. WOLFF, Et. (Edit.), 1965 — New methods in embryology; detection of molecules through immunochemical methods

Symposium reports etc.

35. DEFENDI, V. (Edit.), 1964 — Retention of functional differentiation in cultured cells
36. EMMELOT, P. and O. MÜHLBOCK (Edit.), 1964 — Cellular control mechanisms and cancer
37. GOOD, R. A. and A. E. GABRIELSEN (Edit.), 1964 — The thymus in immuno-biology; structure, function, and role in disease
38. HARRIS, R. J. C. (Edit.), 1964 — Cytogenetics of cells in culture
39. KIORTSIS, V. and H. A. L. TRAMPUSCH (Edit.), 1965 — Regeneration in animals and related problems
40. KOLLER, Th. and H. ERB (Edit.), 1964 — Medikamentöse Pathogenese fetaler Missbildungen
41. LEVINE, L. (Edit.), 1963 — The cell in mitosis
42. LOCKE, M. (Edit.), 1964 — The role of chromosomes in development
43. LOPASHOV, G. V., A. A. NEJFAKH and O. G. STROEVA (Edit.), 1963 — Mechanisms of cellular differentiation and induction
44. MONTAGNA, W. and W. C. LOBITZ (Edit.), 1964 — The epidermis
45. PURPURA, D. P. and J. P. SCHADÉ (Edit.), 1964 — Growth and maturation of the brain (Progress in Brain Research, vol. 4)

    HIMWICH, W. A. and H. E. HIMWICH (Edit.), 1964 — The developing brain (Progress in Brain Research, vol. 9)
46. SCHWEIZERISCHE AKADEMIE DER MEDIZINISCHEN WISSENSCHAFTEN, 1964 — Teratogenesis
47. SELA, M. (Edit.), 1964 — New perspectives in biology
48. SINGER, M. and J. P. SCHADÉ (Edit.), 1964 — Mechanisms of neural regeneration (Progress in Brain Research, vol. 13)

Plant morphogenesis

49. BROOKHAVEN NATIONAL LABORATORY, 1964 — Meristems and differentiation

1. BIOLOGY DATA BOOK

1964

Editors: Ph. L. Altman
and D. S. Dittmer
633 pp., 155 tbs.

Federation of American
Societies for Experimental Biology
Washington, D.C.
Price: $ 10.—

This compilatory work is a radical revision of the "Handbook of Biological Data", which was published in 1956 by the W. B. Saunders Co. The old handbook has been tested in daily use by a special advisory committee, and the revision was carried out on the basis of their experience and the suggestions of other users, with the help of 470 biologists acting as contributors and reviewers.

The main suggestions for improvement have been larger type, literature references, and a detailed index. These have had as a consequence that the number of tables included had to be drastically reduced. Against 445 in the old book, there are 155 in the new one. The grouping of the tables has been altered slightly. The original section on ecology and biogeography has been dropped, and a new section on materials and methods inserted. The latter includes data on culture media, sea water, buffer solutions, anaesthetics, fixation, staining, histochemistry etc. etc.

The "Biological Handbooks" are at present prepared unter the auspices of the committee on Biological Handbooks, Federation of American Societies for Experimental Biology, Washington D.C.

2. PATTERNS OF MAMMALIAN REPRODUCTION

2nd ed., 1964

by S. A. Asdell
670 pp., 17 tbs.

Cornell Univ. Press
Ithaca, N.Y.
Price: $ 9.75

The first edition of this book appeared in 1946. It has now been brought up to date. The book is not a continuous text but a species-by-species compilation of data in a strict taxonomic order. All mammalian orders are represented, some with only one or a few species. All species, both domestic and wild, on which literature is available are included.

In the descriptions particular stress is placed on the quantitative aspects of reproduction. Furthermore, fundamental data on the histology and physiology of the reproductive organs are supplied. Gaps in existing knowledge are indicated as suggestions for further research.

Literature references (no titles) are appended to each species or group of species. There are no illustrations. The book is concluded by indexes to Latin and vernacular names.

3. THE CELL

Biochemistry, Physiology, Morphology
Vol. 6, 1964

Editors: J. Brachet and A. E. Mirsky
564 pp., 203 figs., 18 tbs.

Academic Press
New York — London
Price: $ 18.—

This volume completes a thorough treatise on the cell. Competent biologists analyzed its biological, biophysical, and biochemical aspects. The excellence of the articles justified the extension of this series from the originally planned three volumes to the present six.

The first two chapters of vol. 6 deal with the nucleus and the cytoplasm of Protozoa. They are followed by an excellent chapter on the genetics of fungi. The concluding chapters discuss form, function, and ultrastructure of plant cells, sensory cells, and connective tissue cells.

Contributors: Cordier (Bruxelles), Esser (Köln), Fitton Jackson (Cambridge), Grell (Tübingen), Raper (Cambridge, Mass.), Trager (New York, N.Y.), Voeller (New York, N.Y.)

4. CYBERNETICS AND BIOLOGY

1965

by F. H. George
146 pp., 18 figs.
(paper-bound)

Oliver & Boyd
Edinburgh — London
Price 12 s. 6 d.

Since mathematical and semi-mathematical models are increasingly used in attempts to explain developmental processes, we thought it of interest to bring this booklet to the attention of our readers. Although it does not concern itself with problems of development, it constitutes a useful, brief introduction into the fundamentals of cybernetic thinking, with particular reference to the nervous system and behaviour, and with a minimal use of mathematics. The author is a psychologist by origin, and has written a well-known book called "The brain as a computer".

5. TEMPORAL ORGANIZATION IN CELLS

A dynamic theory of cellular control processes
1963

by B. C. Goodwin
163 pp., 11 figs.

Academic Press
London — New York

This is an unusual type of book to be reviewed in this periodical. The author's aim has been to present an analysis of the statistical behaviour of the interacting cellular control systems which are assumed to underlie the temporal organization of cells. To this end he introduces variables analogous to quantities known from thermodynamics. He emphasizes that he does not wish to apply classical thermodynamics to the study of cell behaviour, but to lay a new molecular foundation, in terms of cellular control processes, for a "thermodynamic-like" analysis of cellular properties. In other words, the mathematical structure of statistical physics is used for the development of essentially new notions. These notions are given the same names as variables of classical thermodynamics, such as temperature, entropy, and energy, but they are prefixed by the adjective "talandic", a neologism derived from the Greek "talantosis" (meaning oscillation), emphasizing the fact that all these quantities are properties of a system whose fundamental dynamic characteristic is the occurrence of oscillations.

The book contains a considerable amount of formal mathematics. However, the author claims that the greater part of the text can be read without close attention to mathematical treatment. In fact, the treatment of the subject as a whole is by no means exclusively formal. The theory is confronted with known experimental results in many places, and new experiments are suggested by which the validity of the theory might be tested.

It is impossible to consider the chapters of the book one by one. The table of contents is printed below. Suffice it to say that the discussion of the "epigenetic system" in chapters 4-7 mainly concerns the cell, not the organism as a whole. Epigenesis in embryonic systems is not discussed before chapter 8, which includes a section entitled "Talandic properties of embryonic systems".

The book has a foreword by Prof. C. H. Waddington.

Table of contents: Chapter 1: Introduction. Chapter 2: System and environment. Chapter 3: Control systems and rhythmic phenomena in cells. Chapter 4: The dynamics of the epigenetic system. Chapter 5: The statistical mechanics of the epigenetic system. Chapter 6: The relaxation time of the epigenetic system. Chapter 7: Statistical properties of the epigenetic system. Chapter 8: Applications and predictions.

6. PHYSIOLOGICAL MAMMALOGY

Vol. 2, Mammalian reactions to stressful environments
1965

Editors: W. V. Mayer and R. G. van Gelder
326 pp., 44 figs., 35 tbs.

Academic Press
New York — London
Price: 28 s.

This is the second volume of a new serial publication in which the emphasis is on other than the normal laboratory mammals. The first volume dealt with mammalian populations and included data on the effect of population size on reproduction and development (contribution by J. J. Christian). The present volume opens with an essay by S. A. Asdell entitled "Reproduction and development". This may be said to supplement Asdells compilatory book reviewed above (see review no. 2). The present essay is concise (36 pages) but its scope is broad. It deals with such aspects as evolution, anatomy, and physiology of reproductive organs; implantation and placentation; development, gestation, and birth; the numbers of young; lactation; secondary sexual characters. The stress is on physiological mechanisms throughout.

Although Asdell's contribution bears no direct relationship to the subject indicated by the title of this volume, it nevertheless provides some of the normal morphological and physiological information necessary for the evaluation of research on the influence of stress on reproduction.

The chapter is not illustrated. It has a bibliography of five pages.

The other two chapters of this volume deal with water metabolism (Chew) and hibernation (Kayser) respectively. In Chews essay some attention is devoted to the role of the water balance in reproduction, pregnancy, and lactation.

Contributors to vol. 2: Asdell (Ithaca, N.Y.), Chew (Los Angeles, Cal.), Kayser (Strasbourg).

7. REPRODUCTIVE PHYSIOLOGY

Comparative reproductive physiology of domestic animals, laboratory animals, and man
2nd ed., 1964

by A. V. Nalbandov
316 pp., 44 figs., 57 tbs.

W. H. Freeman & Co.
San Francisco — London
Price: 54 s.

The first edition of this student's text book appeared in 1958 and was reviewed in the eigth issue of the G.E.I.S. (1959, p. 237). In the second edition the organization of the subject matter has remained unchanged, but many sections have been amplified or revised, leading to a slight increase in the number of pages. Many figures have been replaced by newer ones.

8. CELL AND TISSUE CULTURE

3rd ed., 1965

by J. Paul
382 pp., 56 figs., 12 pls., 23 tbs.

E. & S. Livingstone Ltd.
Edinburgh — London
Price: 35 s.

The third edition of this book does not differ substantially from the second edition of 1960. Apart from minor alterations in the text and selective, up-to-date additions to the bibliography, the central chapters on primary explantation techniques have been more logically arranged and the section on organ culture expanded. The book remains one of the most informative and practically useful on the subject.

See also review no. 32 below

9. THE EMERGENCE OF BIOLOGICAL ORGANIZATION

1964

by H. Quastler †
95 pp., 12 figs.

Yale University Press
New Haven — London

This essay is based on notes for a course of lectures given by the author as visiting Professor of theoretical biology at Yale University in 1963. Although the book does not concern itself specifically with developmental problems, it is reviewed here for the benefit of those who are interested in an introduction to an important aspect of theoretical biology.

The author had planned a book on a mathematical theory of biological organization, but his untimely death prevented this. The present essay may be regarded as representing the beginnings of such a book. The essay, left unfinished by the author, was edited by P. A. Steward of Emory University and T. H. Waterman of Yale University, but is opened by a brief preface by the author. The book will be of interest only to those having a good knowledge of mathematics and molecular genetics, combined with some knowledge of information theory.

To characterize the book, we will restrict ourselves to citing the second part of the preface: "For individual components of biological systems the problem of organization is one of specification, or information content; this will be illustrated by the question of the specification and development of nucleic acids. With pairs of components different problems arise relating to function, information transmission, action and interaction of information, and the like; these will be discussed in terms of the enzymatic role of proteins. The next level of analysis deals with interactions of actions; it is represented by the interrelations, inside the cell, of nucleic acids which have acquired usefulness by specifying functional proteins. This is as far as the analysis has been carried. Evolution is considered at all levels since evolutionary history is a very important feature of living things".

The book is in three chapters, entitled respectively "Information"; "Information Interaction and the Signature Principle", and "Organized Systems and Gene Interactions".

10. MODERN GENETICS

vol. 1, 1965

by J. A. Serra
540 pp., 108 figs., 62 tbs., 4 pls.

Academic Press
New York — London
Price: 105 s.

This is a completely revised and partially rewritten edition of a book first published in Portuguese in 1950, which has been successfully used as an advanced, comprehensive text. The English text is to be published in three volumes. Results up to 1962 or 1963 are included.

Volume 1 is in three parts, which deal respectively with genetic transmission and Mendelism, with recombination, genetical statistics and chromosome structure, and with multiple alleles and gene subdivision. Volume 2 will deal with physiological genetics and the inheritance of quantitative characters, and volume 3 with cytoplasmic inheritance, nuclear mutations, and sex determination. Since vols. 2 and 3 are of more specific interest to our readers, they will be reviewed more extensively as they appear.

11. ANIMAL EMBRYOLOGY AND PRE-EMBRYONIC ONTOGENY

1963

by P. Chanturishvili
238 pp., 23 figs.

State Publishing House „Sodna"
Tbilisi

This book is written in Georgian, and is therefore announced by title only. The author is head of the Laboratory of Animal Embryology, Institute of Zoology of the Georgian Academy of Sciences, Tbilisi, U.S.S.R.

12. INTERACTING SYSTEMS IN DEVELOPMENT

1965

by J. D. Ebert
Modern Biology Series
235 pp., 130 figs.
(paper-bound)

Holt, Rinehart & Winston
New York etc.

This new addition to the Modern Biology Series presents a modern and refreshing approach for the student beginning embryology. The framework of the book is given by emphasis on interaction, whether between the sperm and egg at fertilization, between tissue types in organogenesis or in the developmental aspects of immunity. Pains have been taken to elucidate the concepts current in developmental biology and the experiments on which they are based, and to indicate outstanding problems.

The subjects dealt with are as follows: the origin of cell and individual specificity and the component processes of development, interactions of egg and sperm, cleavage and gastrulation, tissue interactions in organogenesis, interactions of nucleus and cytoplasm, the molecular basis of gene expression during development, the products of gene expression and their regulation, beyond the ribosome, mechanisms of cell and tissue interactions, humoral regulation of growth, development of endocrine and nervous co-ordination, and developmental aspects of immunity.

Each chapter is followed by an admirably selected reading list covering both classical and recent work. The book is profusely illustrated.

13. HEREDITY AND DEVELOPMENT
1963

by J. A. Moore
245 pp., 83 figs., 2 tbs.
(paper-bound)

Oxford University Press
New York
Price: 16 s.

Although this book appeared in 1963, it is thought to be of sufficient interest to be reviewed in the present issue.

The basic plan of the book has been to show how ideas in the fields of embryology and genetics were first formulated and then tested experimentally. To students in these fields it provides a good impression of the gradual development of scientific theories and of the experimental approaches deduced from them. It must be mentioned, however, that some important recent advances are totally disregarded.

The book is in two parts: "The development of genetic concepts" (chapters 1-18, occupying about three quarters of the book), and "Embryology" (chapters 19-22).

The chapters 1 through 16 are concerned with classical genetics and have been reprinted almost without change from the author's "Principles of Zoology" (1957). This also applies to chapters 19 through 21, which briefly discuss amphibian development and the problem of differentiation. Of the remaining three chapters, 17 and 18 deal with the structure and function of DNA, the Watson-Crick DNA model, and the various types of RNA. Chapter 22 finally discusses the developmental control of genetic systems.

Each chapter has its own brief list of suggested reading. The illustrations are adequate, but some of the photographical ones are hardly satisfactory, owing to printing on ordinary paper.

The reviewer feels that it is highly regrettable that the chapters reprinted from the earlier book have not been brought up-to-date. For instance, a contemporary book of this kind should certainly mention lampbrush chromosomes, and the phenomenon of chromosome puffing, with its important developmental implications.

14. VERTEBRATE EMBRYOLOGY
1964

by R. Rugh
608 pp., 326 figs., 11 tbs.

Harcourt, Brace & World Inc.
New York — Burlingame
Price: $ 9.50

The present text is primarily meant for premedical students. The approach to the subject is unorthodox in that the text is arranged in complete and separate developmental histories — of the frog, the chick, the mouse, the pig, and man. Each of these five chapters begins with a description of the reproductive system of the species concerned, and then proceeds from gametogenesis through fertilization to embryonic and foetal development.

The book is opened by a short chapter in which the general aspects of embryonic development are stressed, in contrast to the specific traits that receive full attention in the five main chapters of the book. A very brief general chapter on embryonic membranes in higher vertebrates is intercalated between the chapters dealing with the chick and the mouse. The final chapter briefly discusses such general subjects as cell division, the germ layer concept, organizers and inductors, continuity of germ-plasm, the biogenetic law, and teratogenesis.

The chapters on the frog, the chick, the mouse, and man are concluded by very brief sections on experimental embryology, giving the bare minimum of information. In the chapter on man, this information centres around cytogenetics. Otherwise the approach is entirely descriptive. An important feature of the book are its numerous excellent illustrations, often grouped into series providing a dynamic picture of normal development. Most of the drawings are taken from other books, but a large proportion of the photographs, both of whole embryos and of serial and single sections at low and high magnifications, are original. Among many other notable illustrations there is an extended "millimeter-by-millimeter" series of photographs of human embryos.

A special word may be said about the chapter on the mouse. So far the mouse has seldom, if ever, been treated so extensively in a textbook of embryology. This chapter, and particularly its second half, is so organized that it might be used as a concise Normal Table for experimental work. This is particularly important since no detailed Normal Table of mouse development is available.

There are no literature references in the text. The three-page bibliography contains only books and a few large publications. The book is concluded by an extensive glossary of embryological terms, and a good subject index. Layout and printing of the book are excellent.

The glossary contains many terms from the domain of experimental embryology. Why they appear in the present book is not entirely clear. Moreover, in the reviewer's opinion, several of the definitions given for these terms in particular are not very satisfactory, and some are definitely wrong.

Another minor point of criticism concerns figs. 3.6 and 3.7, which have apparently been interchanged.

15. EMBRYOLOGIE

Ein Lehrbuch auf allgemein biologischer Grundlage

2nd, revised edition
1965

by D. Starck
709 pp., 559 figs., 3 tabular appendixes

Georg Thieme Verlag
Stuttgart
Price: DM 88.—

The first edition of this monumental treatise appeared in 1955. The present edition has been thoroughly revised. The outstanding feature of the book is that it attempts to present vertebrate comparative embryology and developmental physiology as a unity, with most of the stress on the latter.

The sections on developmental physiology and embryogenesis were entirely rewritten. New material was included from the domains of electron microscopy, histochemistry, and chromosomal analysis.

Notwithstanding the increase in content the total size of the book has hardly increased, as a result of a more economical lay-out. The number of illustrations was increased by more than 10 %. Many recent titles were incorporated in the extensive bibliography, which is much easier to use in its present typography.

The production of the book is excellent in all respects.

16. ADVANCES IN MORPHOGENESIS
Vol. 4, 1964

Editors: M. Abercrombie and J. Brachet
297 pp., 84 figs., 11 tbs.
Academic Press
New York — London
Price: $ 12.—

This series is now so well known that a detailed review of the 4th volume seems superfluous. Only two of the contributions in this volume will be singled out on account of their great importance in the eyes of the reviewer.

The first is that by Gurdon entitled "The transplantation of living cell nuclei". The importance of this contribution lies in the fact that the author does not restrict himself to his own and related work on amphibians, but brings together all data available at present on a variety of organisms, such as protozoa, fungi, algae, insects, and amphibians. The data are discussed against the broadest possible background.

The second contribution to be mentioned specifically is that by Stange entitled "Regeneration in lower plants". In this instance the importance for the animal embryologist lies in the fact that a means is afforded him to get acquainted with morphogenetic phenomena in organisms much simpler than the higher animals, and possessing morphogenetic correlations which are in part better amenable to experimental analysis.

For the benefit of the readers the table of contents of vol. 4 is printed below.

Contents: The transplantation of living cell nuclei (J. B. Gurdon); Morphogenesis in *Micrasterias* (H. Waris and P. Kallio); Problems in corneal morphogenesis (A. J. Coulombre); Regeneration in lower plants (L. Stange); Regeneration in annelids (H. Herlant-Meewis); Biological aspects of the yolk of the hen's egg (R. Bellairs).

17. MOLECULAR AND CELLULAR ASPECTS OF DEVELOPMENT
1965

Editor: E. Bell
525 pp., 400 figs., 59 tbs.
Harper & Row
New York — Evanston — London
Price: 81 s.

This book is of a quite unusual type in that it is essentially a selection of "key papers" published earlier in various media. The editor has used this collection of papers for a first course in developmental biology, but it is not meant to substitute for either descriptive or experimental embryology. Indeed, some background in both is required for the use of the book, which is also meant for graduate students and advanced scientists.

The 45 papers are arranged in 14 chapters, entitled respectively: cell association, induction, cytodifferentiation and cell division, role of the nucleus, chromosome differentiation, genetic control of differentiation, isozymes, enzyme regulation, RNA synthesis, synthesis of cell specific products, macromolecules as the basis of structure, hormones, growth substances, and cell-virus interaction. Each chapter is opened by a brief introduction by the editor (1-2 pages). This is not intended as a review of the subject, but rather as a means of summarizing the status of some of the problems and of directing the attention to others. Each of these introductions has its own brief bibliography.

About two-thirds of the 45 papers date from 1960 or later. A few date back to the late forties and early fifties. The papers have mostly been taken from widely available journals, symposium reports and periodical publications published in English. Among these, the Proceedings of the National Academy of Sciences (10 papers), Science (7 papers), and Developmental Biology (4 papers) together have supplied about half of all the papers. Six papers deal specifically with botanical subjects. One paper (by Humphreys, Penman and Bell, on stable polysomes in chick down feathers) is apparently published here for the first time.

The selection of the papers is in many ways admirable, and the book certainly provides a good first-hand picture of some of the most exciting frontiers of modern developmental biology.

The book is very well printed, and the original illustrations of the papers are reproduced with admirable clarity. The book unfortunately lacks author and subject indexes.

Notwithstanding the qualities of this book, some doubt may be expressed as to the justification of books of this sort. The only original part of this book, apart from the paper by Humphreys *et al.*, are the brief editor's introductions, totaling some 22 pages only. It remains to be seen if students and others will be prepared to pay a rather high price for a collection of papers which are for the far greater part easily accessible in or through most University libraries.

Contributing authors: Abbott (Philadelphia, Pa.), Ada (Melbourne), Auerbach (Madison, Wisc.), Austin (Melbourne), Baglioni (Naples), Beermann (Tübingen), Bell (Cambridge, Mass.), Bolle (Geneva), Bonner (Princeton, N.J.), Briggs (Bloomington, Ind.), Brown (Baltimore, Md.), Chevalley (Geneva), Cohen (Nashville, Tenn.), Darnell (New York, N.Y.), De la Tour (Geneva), Denhardt (Pasadena, Calif.), Ebert (Baltimore, Md.), Edgar (Pasadena, Calif.), Epstein (Geneva), Gall (New Haven, Conn.), Glimcher (Boston, Mass.), Grobstein (stanford, Calif.), Gross, J. (Boston, Mass.), Gross, P.R. (Providence, R.I.), Gurdon (Oxford), Haemmerling (Wilhelmshaven), Hodge (Pasadena, Calif.), Holtfreter (Rochester, N.Y.), Holtzer, H. (Philadelphia, Pa.), Holtzer, S. (Philadelphia, Pa.), Hommes (Cambridge), Hotta (Urbana, Ill.), Humphreys (Cambridge, Mass.), Kellenberger (Geneva), King (Philadelphia, Pa.), Kirk (Chicago, Ill.), Konigsberg (Baltimore, Md.), Lash (Philadelphia, Pa.), Lerner (Detroit, Mich.), Levi-Montalcini (St. Louis, Miss.), Lielausis (Pasadena, Calif.), Malkin (Providence, R.I.), Mapes (Ithaca, N.Y.), Marcus (New York, N.Y.), Markert (Baltimore, Md.), Mears (Ithaca, N.Y.), Miller (Bloomington, Ind.), Moore (Boston, Mass.), Moscona (Chicago, Ill.), Moyer (East Brunswick, N.J.), Nemer (Philadelphia, Pa.), Nossal (Parkville, Australia), Penman (Cambridge, Mass.), Porter (Cambridge, Mass.), Rossetti (Chicago, Ill.), Roth (San Diego, Calif.), Rubin (Berkeley, Calif.), Rutter (Urbana, Ill.), Savage (New Haven, Conn.), Schmitt (Cambridge, Mass.), Scott (Cambridge, Mass.), Skoog (Madison, Wisc.), Smith (Ithaca, N.Y.), Sparks (Cambridge, Mass.), Steinberg, C.M. (Oak Ridge, Tenn.), Steinberg, M.S. (Baltimore, Md.), Stern (Urbana, Ill.), Stevens (Bar Harbor, Me.), Steward (Ithaca, N.Y.), Susman (Madison, Wisc.), Szenberg (Melbourne), Temin (Madison, Wisc.), Townes (Rochester, N.Y.), Villee (Boston, Mass.), Walker (Houston, Texas), Weiss (Houston, Texas), Wessells (Stanford, Calif.), Wigglesworth (Cambridge), Wilt (Berkeley, Calif.), Zilliken (Nijmegen).

18. ORGANOGENESIS
1965

Editors: R. L. DeHaan and H. Ursprung — Holt, Rinehart & Winston
815 pp., 344 figs., 25 tbs. — New York etc.

This book is based in part on material presented at the International Conference on Organogenesis, held in September 1964 in Baltimore, Md. The conference was sponsored by the International Institute of Embryology. The organizers felt that ample attention was being given to-day to molecular biology, and that the time had come to re-emphasize the study of development at higher levels of organization, but with due consideration of the interactions between the various classical and modern levels of investigation. Consequently, the problems of organogenesis are treated in this book in an integrated and comprehensive manner. The book has a much wider scope than the usual Symposium report; it has almost the character of a collaborative treatise, and is equally useful to investigators and to advanced students. This is also reflected in the considerable length of the bibliographies of many chapters.

Nearly half of the 31 chapters were specially written for this book and are not based on material presented at the Conference. It is particularly the section on the viscera (see below) that was extended far beyond the scope of the Conference by the inclusion of chapters on the heart, the liver, the lungs, the thyroid, the endocrine pancreas, and the kidney.

The editors are to be congratulated, not only on having produced a well-balanced book, but also on its unusually rapid publication.

The book is organized in six sections, the first of which consists of three chapters on basic mechanisms ("Genes and development" by Ursprung, "Intercellular adhesion and histogenesis" by Mercer, and "Mechanisms of morphogenetic movements" by Trinkaus). The other sections deal with specific organs and organ systems, to wit: the nervous system (including the eye; 6 chapters), the limb (5 chapters), the skin (1 chapter), the viscera (including several endocrine and lymphatic organs; 7 chapters), and the reproductive system. The last section is subdivided into two parts, one dealing with sex differentiation (7 chapters), and one with the placenta (2 chapters).

The book is beautifully produced and the numerous illustrations are of the highest quality, and clearly and extensively labeled. The book is concluded by a subject index.

The book could have been made more valuable as a work of referene by the inclusion of an author index, although it is realized that this would have delayed publication. Another minor criticism concerns the lay-out of the bibliographies; it is difficult to find specific authors' names, since they are not capitalized and do not project from the margin of the column. Also, though perhaps not preferable for aesthetic reasons, capitalization of authors' names in the text would have made the use of the book as a reference work easier. The numerical reference systems as such is a definite improvement, and is commendable for other books.

Contributors: Amprino (Bari), Angeletti (St. Louis, Miss.), Auerbach (Madison, Wisc.), Bell (Cambridge, Mass.), Charniaux-Cotton (Gif-sur-Yvette), Chieffi (Naples), Coulombre (Bethesda, Md.), Croisille (Nogent-sur-Marne), DeHaan (Baltimore, Md.), Gallien (Paris), Grillo (Ibadan), Hamilton (Austin, Texas), Hay (Boston, Mass.), Jost (Paris), Källén (Lund), Konigsberg (Baltimore, Md.), Le Douarin (Nogent-sur-Marne), Levi-Montalcini (St. Louis, Miss.), Mercer (Canberra), Milaire (Bruxelles), Moffett (Seattle, Wash.), Mossman (Madison, Wisc.), Ortiz (Rio Piedras, Puerto Rico), Price (Chicago, Ill.), Shepard (Seattle, Wash.), Sorokin (Boston, Mass.), Sperry (Pasadena, Calif.), Teng (Austin, Texas), Torrey (Bloomington, Ind.), Trinkaus (New Haven, Conn.), Ursprung (Baltimore, Md.), Watterson (Urbana, Ill.), Wells (Minneapolis, Minn.), Wigglesworth (Cambridge), Wilkin (Bruxelles).

19. ADAPTIVE GROWTH

1964

by R. J. Goss
360 pp., 48 figs., 6 tbs., 15 pls.

Logos Press
Academic Press
London — New York
Price: 70 s.

The nature of this stimulating monograph can perhaps best be made clear by quoting a few sentences from the author's preface. Speaking about the book, he says: "Therefore, in the present account an attempt has been made to seek interrelations between many of the classic examples of vertebrate growth, including cell turnover, normal postembryonic enlargement, compensatory hypertrophy, localized wound healing, and regeneration. Only by such a comparative approach will it be possible to identify the most common denominator by which these seemingly diverse, but actually similar, developmental events are controlled". After stating the fundamental problem of growth regulation as "... the question of whether growth is governed by considerations of organ size *per se*, or by the requirements for physiological activity", he continues to state that "The facts lead us overwhelmingly towards the latter alternative ... If future investigators are thus persuaded to concentrate on the biochemical mechanisms by which physiological demands are translated concomitantly into functional activity and cellular proliferation, this monograph will have been well worth writing".

In order to provide an idea of the scope of the book, the table of contents is printed below. The book serves the additional purpose of constituting a guide to the extensive literature in the field of organ and tissue growth regulation. The large bibliography is up-to-date till 1963. Unfortunately, an authors' index is lacking.

The book is illustrated with numerous excellent line drawings and schemes, and a number of photographs. It is concluded by a subject index.

Contents: I. Introduction, II. Allometry, III. Theoretical, IV. Normal development, V. Wound healing, VI. Lens regeneration, VII. Gross aspects of hypertrophy, VIII. Histological hypertrophy, IX. Cellular hypertrophy, X. Cellular hyperplasia, XI. Molecular aspects of compensatory growth, XII. Tissue augmentation, XIII. Humoral growth regulation, XIV. Maternal-foetal relationships, XV. The functional demand theory of growth regulation, XVI. Conclusion.

20. EXTRACHROMOSOMAL INHERITANCE

1964

by J. L. Jinks
Foundations of Modern Genetics Series
191 pp., 41 figs.
(paper-bound)

Prentice Hall Inc.
Englewood Cliffs, N. J.

It is an odd coincidence that two short books on cytoplasmic inheritance, each written by a British scientist, and each directed to the same category of readers, should have appeared in the same year. One is the present book, the other the monograph by D. Wilkie, "The cytoplasm in heredity", which was reviewed in the Supplement to the 10th issue (1964, page 29).

The two books have of course much in common, and both are written primarily for the use of students. The present book is the larger of the two, and the subject matter is arranged in a more systematical manner. It therefore serves as an introduction to the field also for developmental biologists in general, although the limited number of references is a drawback. The author is an associate of Prof. K. Mather of Birmingham University.

The introductory chapters (1 and 2) discuss cell heredity in general, and the extrachromosomal cell constituents with physical continuity. Chapters 3-6 deal with the criteria of extrachromosomal inheritance and present the evidence that has been collected by their application. Chapters 7-9 are concerned with the nature of the extrachromosomal system, which is still largely hypothetical. Chapters 10 and 11 discuss the relationships between the chromosomal and extrachromosomal systems, and together with chapter 12, which is entitled "Extrachromosomal differences in development", constitute the portion of the book that is of the most immediate interest to developmental biologists. These three chapters together occupy 35 pages. The final chapter discusses extrachromosomal variation and evolution.

Each chapter is concluded by a brief list of selected references. The book is illustrated with clear diagrams. There is a combined author and subject index.

One minor flaw should be pointed out. In fig. 12.2 (erroneously labeled as fig. 2.2) the top and bottom halves have apparently be interchanged. As it is, they do not match the references in the text.

21. DIFFERENTIATION AND AGEING OF VEGETATIVE NEURONS

1965

by L. I. Korotchkin
188 pp., 62 figs., 2 col. pls.,
12 tbs. (paper-bound)

Izdatelstwo Nauka
Moscow — Leningrad

The author of this Russian monograph is a member of the State Medical Institute, Tomsk, Siberia. The book deals with the descriptive and experimental morhology (self-differentiation), cytochemistry, and cytophysiology of the developing and ageing mammalian vegetative nervous system.

The bibliography covers 22 pages, 10 of which are devoted to Russian authors. The book is illustrated mainly with photomicrographs.

22. INDUCTION PHENOMENA IN TISSUE REGENERATION

1964

by G. Levander
211 pp., 67 figs.

Almqvist & Wiksell
Stockholm
The Williams & Wilkins Cy.
Baltimore

The author of this monograph is a surgeon who has for a long time carried out fundamental research on histogenesis alongside his daily practice. The book is a synthetic review of the studies carried out by him and his associates at Köping Hospital, Sweden, since 1935; in addition, the general biological background of these studies is discussed.

The main experimental method used by the author and his associates is the "implantation method", in which a fragment of the tissue to be analyzed for its powers of histogenetic induction is transplanted heterotopically in full-grown laboratory mammals, often after massive staining with trypan blue. The implant degenerates and at the same time exerts inductive influences on blastemal cells which come to surround it. The author's main preoccupation has been with bone, but other tissues are also discussed, such as striated muscle, endometrium, gastric mucosa, and skin epithelium.

The book is opened by two theoretical chapters, dealing with epigenesis and preformation during embryonic development and in tissue regeneration respectively. The final chapter is devoted to tumour growth. Throughout the book, much emphasis is placed on theoretical aspects.

The book is illustrated with photographs, mostly of histological sections. The quality of the photographs is seldom excellent. This is in part due to the technique of reproduction. Each chapter has its own bibliography. The book has no indexes.

23. DEVELOPMENT OF THE EYE
1964

by G. V. Lopashov and O. G. Stroeva
translated by B. Meytar
177 pp., 65 figs., 3 tbs.

Distributed by
Oldbourne Press
London

This is a translation of a book that appeared in Russian in 1963, and was announced in the tenth issue of this periodical (1963, page 301). Only a few remarks will be made to supplement the earlier announcement.

Size limitations have necessitated a selective rather than an exhaustive treatment of the subject. Thus, such aspects as the appendages of the eye, size correlations between the eye and the body, and hormonal influences on eye development are not discussed.

The Russian section of the bibliography (10 pages in the present book) has been transliterated, and English translations of the titles are given. The non-Russian section (19 pages) has been photographically reproduced from the original book. The book is printed in photo-offset. The original illustrations are on the whole well-reproduced. The book has no indexes.

24. PHYSIOLOGY OF THE AMPHIBIA
1964

Editor: J. A. Moore
666 pp., 69 figs., 30 tbs.

Academic Press
New York — London
Price: $ 18.—

This is a collaborative treatise written by 10 contributors. Its purpose is to fill the need for a general book covering amphibian physiology, which will be useful for advanced students as well as for physiologists working with amphibians or other vertebrates.

From the table of contents printed below it will be seen that on the one hand the field of physiology is defined somewhat more broadly than usual, by the inclusion of chapters on development, metamorphosis, and regeneration. On the other hand, some commonly included aspects of physiology are lacking, such as reproductive, nervous, sensory, and behavioural physiology. However, a future volume dealing with the fields neglected here is announced in the editor's preface.

The chapters range in size from 40 to nearly 100 pages. The chapters most obviously important for our readers are the last three (42, 76, and 78 pages respectively). However, almost all other chapters contain shorter or longer sections dealing with embryonic and larval stages specifically. The first chapter is the longest, and gives a wealth of information on amphibian biochemistry and energy metabolism.

All chapters have extensive bibliographies. As a rule the most recent literature cited dates from 1960-62. Usually much of the older literature is also cited. The book is adequately illustrated, and is concluded by author, species, and subject indexes.

Contents: 1. The metabolism of Amphibia (G. W. Brown, Jr.); 2. The digestive system (W. G. Reeder); 3. Blood and respiration (G. E. H. Foxon); 4. Physiology of the amphibian heart (A. J. Brady); 5. Water balance and kidney (I. J. Deyrup); 6. Amphibian muscle (B. C. Abbott and A. J. Brady); 7. Endocrinology of the amphibia (A. Gorbman); 8. Metamorphosis (W. Etkin); 9. The developmental physiology of amphibia (L. J. Barth); 10. Regeneration (S. M. Rose).

25. DER ZELLEIWEISZSTOFFWECHSEL WÄHREND DER NIDATION, PLAZENTATION UND KEIMENTWICKLUNG

(Blasto-, Embryo- und Fetogenese)
Autoradiographische Untersuchungen mit Isotopen-markierten Aminosäuren an trächtigen Ratten
1964

by H. G. Müller
118 pp., 45 figs., 11 tbs.

Urban & Schwarzenberg
München — Berlin
Price: DM 38.—

This booklet is an extensive publication rather than an exhaustive monograph. It is concerned mainly with the author's original research on protein metabolism of maternal and embryonic cells and tissues during egg implantation, placentation, embryogenesis and organogenesis. The technique used was qualitative and quantitative autoradiography after administration to pregnant rats of tritiated phenylalanine or yeast marked with S^{35}. The results are grouped in two sections, one dealing with implantation, placentation, and the musculature of the uterus, the other with blastogenesis, embryogenesis, and organogenesis in the fetus.

Much space is devoted to the critical evaluation and interpretation of the autoradiographs, and to the comparison with data obtained by other authors. Finally, attention is drawn to the significance of the results with regard to the origin of blasto- and embryopathies.

The book is mainly illustrated with photographs. Many of these are in pairs, one showing an autoradiograph and the other an adjacent stained section. The book is concluded by an extensive bibliography.

26. THE GROWTH PROCESS IN ANIMALS

1964

by A. E. Needham
522 pp., 75 figs., 6 tbs.

Sir Isaac Pitman & Sons Ltd
London

In an era in which embryologists focus so much attention on differentiation, a book concerned almost exclusively with growth as a major biological activity, and as the necessary complement of differentiation, must certainly be welcome.

In this book growth is defined in the broadest possible terms, encompassing in particular the fundamental category of biosynthesis. The author expresses adhesion with J. Z. Young's definition: "Growth is the addition of material to that which is already organized into a living pattern". The author desists from a predominantly mathematical approach, to devote himself to the systematic analysis of growth and growth control in essentially descriptive and qualitative terms.

The book is essentially a synopsis written for the general biologist and student, and contains a wealth of information. However, it is not a mere compilation of facts, much attention being given to theoretical aspects and to implications for general biology as a comprehensive discipline.

The book is in two parts, each occupying about half of the book. Part I, "The analysis of growth" (15 chapters), is a consideration of what may be observed of the growth process at each level of magnitude, beginning at the highest level, the organism as a whole, and going down the scale via organs, tissues, cells, cell organelles, and viruses, to the level of biosynthesis of biological substances.

Part II, "The control of growth" (11 chapters), starts at the other end of the scale, with the raw material for growth, and after discussing such controlling agents as vitamins, nucleic acids, hormones, and the nervous system, ends with a treatment of genetic and external growth factors. This part is concluded by a chapter on growth and differentiation.

The book is adequately illustrated with drawings and photographs. The bibliography covers 35 pages of small print. The book is concluded by author and subject indexes.

27. ENZYME (HANDBUCH DER HISTOCHEMIE, Vol. VII)

Part 4: Intrazelluläre Lokalisation der Enzyme bei der Ontogenese

1964

by R. M. Rosenbaum and F. Rossi
326 pp., 148 figs., 4 tbs., 12 schemata

Gustav Fischer Verlag
Stuttgart
Price: DM 93.—

This book emphasizes those studies that employ specific staining methods for use with light or electron microscopy, to demonstrate enzymes and their association with various cellular organelles. Details of technical methods for the demonstration of specific enzymes are not given. Theory and practice of these must be obtained from handbooks.

Rosenbaum discusses results obtained by various methods for use with light microscopy and electron histochemistry for intracellular localization of enzymes in Protozoa; in invertebrate eggs and embryos; during vertebrate ontogeny; in formed elements of the blood, bone marrow and connective tissue; in plant cells, and in bacteria.

Rossi deals with the histochemistry of enzymes during gametogenesis and various stages of development and differentiation in various animal groups.

The book is well printed and has a very extensive bibliography, mainly up to 1961. There are author and subject indexes.

28. DIE ENTWICKLUNGSSTADIEN DER MITTELEUROPÄISCHEN CURCULIONIDEN

Morphologie, Bionomie, Ökologie

1964

by H. Scherf
aus: Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft
335 pp., 50 figs., 38 tbs.
(paper-bound)

Verlag Waldemar Kramer
Frankfurt/Main

This very specialized monograph is reviewed here for the benefit of those who are specifically interested in the larval development and metamorphosis of Curculionid beetles, and Coleoptera in general. The general part contains a wealth of data concerning reproduction and biology, as well as the external morphology of the various postembryonic stages. The morphological sections are well illustrated. There is also a long section on rearing methods.

The special part (occupying about three quarters of the book) is almost exclusively of taxonomic interest.

29. PHYSIOLOGY AND BIOCHEMISTRY OF THE ORIGIN AND CONTROL OF SEX IN ANIMALS

1965

by Vera N. Schröder
140 pp., 14 figs., 47 tbs.
(paper-bound)

Izdatelstwo Nauka
Moscow

This monograph is written in Russian. The author is a member of the Severtsov Institute of Animal Morphology of the U.S.S.R. Academy of Sciences, Moscow.

The book is concerned largely with physiological, biochemical, biophysical, and immunological properties of mammalian sperm, and their role in the determination of sex-ratio in the progeny. The biochemistry of embryonic sex determination is also discussed.

The bibliography covers 8 pages, 2 of which are devoted to Russian authors. The Russian section contains numerous publications by the author of the book, ranging from 1932 till 1963. The book contains many tables and graphs.

30. LES CULTURES ORGANOTYPIQUES

1965

Editor: J. A. Thomas
392 pp., 168 figs., 8 tbs.
(paper-bound)

Masson et Cie
Paris
Price: 90 N.F.

This book forms part of a series entitled "Biocytologia; Exposés actuels de biologie cellulaire". The present volume is a collection of extensive papers by the director (Et. Wolff) and several members and former members of the "Institut d'embryologie et de tératologie expérimentales du C.N.R.S.", Nogent sur Marne. In view of the fact that many of the results of the Nogent school have been published either as short papers or in journals not very well accessible in countries other than France, this collection of synthetic review papers should prove very useful.

The book is opened by Et. Wolff with a résumé of general principles of organotypic culture *in vitro*. Then follow nine papers which discuss extensively the following topics: differentiation of organs in natural media (le Douarin); differentiation of organs in synthetic media (Kieny); sexual differentiation and intersexuality *in vitro* (Haffen; sections on birds, mammals, and amphibians); influence of hormones and inhibitory substances on organs *in vitro* (Dieterlen-Lièvre); culture and parabiosis of blastoderms (Salzgeber; sections on birds and mammals); organ culture in invertebrates (Ziller-Sengel); reassociation of dissociated cells *in vitro* (Sigot); investigations of organogenesis by dissociation and reassociation of embryonic rudiments *in vitro* (Sengel); organ chimeras, and organotypic cultures of malignant tumours (Em. Wolff). The papers range in size from 28 to 54 pages. Each is followed by an extensive bibliography.

The book is liberally illustrated, mostly with photomicrographs. It has no indexes.

31. EMBRYOLOGY OF THE OVARY AND TESTIS

Homo sapiens and Macaca mulatta

1965

by G. van Wagenen and M. E. Simpson
256 pp., 16 tbs., 90 pls.

Yale University Press
New Haven — London
Price: 56 s.

This book is essentially a photographic atlas. About three quarters of the book are taken up by 90 photographic plates, the rest by a concise text and 16 tables. The developmental period covered is from the earliest appearance of the gonadal anlagen up to the end of foetal life, in accurately timed, closely spaced stages, whereas some more widely spaced stages of later gonadal maturation are also included. The assemblage of this extensive material, unique in its present form, is intended to serve as the necessary descriptive background for various experimental approaches.

The text has been organized into six parts. Parts I and II discuss embryonic and foetal development of the ovary in man and macaque respectively. Part III is devoted to a comparison of the development of human and macaque ovaries. The same pattern is followed for the testis in parts IV - VI. The discussion of ovarian development occupies a total of 46 pages, that of testicular development a total of 23 pages.

The 16 tables are in four groups, concerned with the human and macaque ovary, and the human and macaque testis respectively. Each group contains a tabular survey of the embryonic material used, a kind of "normal table" of the developmental histology of the gonad concerned, and a summary statement of the salient points of its development. There are two tables summarizing comparative points of development between human and macaque gonads.

Each of the 90 plates occupies a full page (26 x 33 cm), and most consist of 3-6 large-size black and white photographs of histological sections. The legends are always on the page facing the plate. The photographs, although not reproduced on glossy paper, are of very good quality, always showing sufficient histological detail, though perhaps not always sufficient cytological detail.

Lay-out and printing of the atlas are excellent, and especially striking for a book of this price. The atlas is concluded by a brief bibliography.

32. CELLS AND TISSUES IN CULTURE

Methods, Biology and Physiology

Vols. 1 and 2, 1965

Editor: E. N. Willmer
Vol. 1: 802 pp., 127 figs., 19 tbs.
Vol. 2: 825 pp., 197 figs., 21 tbs.

Academic Press
London — New York
Price: 168 s. each

This is a collaborative treatise in three volumes, the idea for which arose in

1960. It is of course a quite different book from that by Paul which is reviewed under no. 8 above. The latter book is more of a manual, whereas the present work is compilatory in nature.

In the first volume, the methods of cell, tissue and organ culture are first scrutinized, and an attempt is made to assess their respective merits and applications (chapters 1-3). Secondly, a series of general topics on cell behaviour and metabolism in fairly uniform populations of relatively undifferentiated cells are discussed (chapters 4-12). The problems of differentiation and the interrelationships between tissues form the third group of topics (chapters 13-15, by Grobstein, Moscona, and Wolff respectively). Finally, chapters 16 and 17 deal with the in vitro effects of hormones and vitamins.

The second volume consists of a series of detailed accounts of the contributions made by culture methods to the elucidation of the morphology, physiology and developmental physiology of a representative selection of the various special tissues of the body. Among the tissues treated are cartilage and bone (Biggers), the tooth germ (Glasstone), the eye (Lucas), the otocyst (Friedmann), the lung (Aydelotte), salivary glands, intestinal tract and pancreas (Borghese), the liver (Bang and Warwick), the endocrine glands (Gaillard and Schaberg), and the germ cells and gonads (Wolff and Haffen).

The third volume will be devoted more particularly to the applications of tissue culture to other fields of investigation (pathology, pharmacology) and to results obtained with invertebrate and plant tissues and cells.

The authors selected by the editor for the various specialized chapters are the ones one would have expected to be chosen; they are all leading authorities. The fact that the compilation of the book took several years has of course resulted in not all contributions being equally up-to-date.

The books are well printed and well illustrated. They are concluded by author and subject indexes.

Contributors vol. 1: Abercrombie (London), Dingle (Cambridge), Eagle (New York, N.Y.), Fell (Cambridge), Firket (Liège), Grobstein (Stanford, Calif.), Hsu (Houston, Texas), Lasnitzki (Cambridge), Levintow (Bethesda, Md.), Lucy (Cambridge), Moscona (Chicago, Ill.), Paul (Glasgow), Rinaldini (Cordoba), Seed (Cambridge), Trowell (Harwell), Waymouth (Bar Harbor, Maine), Webb (Cambridge), Willmer (Cambridge), Wolff (Nogent-sur-Marne).

Contributors vol. 2: Aydelotte (Cambridge); Bang (Baltimore, Md.), Biggers (Philadelphia), Borghese (Roma), Cruickshank (Birmingham), Friedmann (London), Gaillard (Leiden), Glasstone (Cambridge), Haffen (Nogent-sur-Marne), Hancox (Liverpool), Jacoby (Cardiff), Lajtha (Manchester), Lucas (Harwell), Murray (New York, N.Y.), Schaberg (Leiden), Sidman (Boston, Mass.), Trowell (Harwell), Warwick (Baltimore, Md.), Wolff (Nogent-sur-Marne).

33.

TERATOLOGY

Principles and Techniques

1965

Editors: J. G. Wilson and J. Warkany
287 pp., 39 figs., 84 pls., 47 tbs.

University of Chicago Press
Chicago — London
Price: 41 s.

This book is the outcome of the First Workshop in Teratology, sponsored by the Commission on Drug Safety, and held in February 1964 at the University of Florida. Apart from the quality of the papers contributed, an outstanding feature of the book is the fact that the demonstrations presented at the Workshop are reproduced in full. Discussions are not recorded.

The book consists of ten chapters, each of which embodies an authoritative paper as well as a "demonstration". The latter usually consists of a concise text supplemented with ample illustrations, pertaining to techniques and procedures used in, or devised for teratogenetic work and the evaluation of its results. This material includes representative photographs of sectioned, cleared or dissected material, specimens of protocol sheets, chronological tables, etc. etc. The demonstrations do not always bear a strict relation to the preceding paper.

The authors are distinguished authorities from the U.S.A. (9) and Canada (2). Except for the first paper, which is a historical synopsis, all chapters contain hitherto unpublished research material, both on mammals and the chick. The papers cover a broad range of subjects such as embryological and genetic aspects of teratology, interaction of intrinsic and extrinsic factors, nutritional factors, drug response factors, growth inhibitors, immunological aspects. Techniques to which special attention is devoted include breeding and maintenance of rats and mice, transplantation of mammalian ova, chick embryo explantation and yolk sac perfusion, uterine vascular clamping, differential irradiation, immunological methods, electrophoretic methods, and methods of administering teratogenetic agents.

The book is very well printed and profusely illustrated. There are no indexes.

On account of the highly diverse nature of the subject matter and of its haphazard arrangement in the book (a consequence of the character of a Workshop) it is highly regrettable that no alphabetical index is included. An author index would also have been useful. The reproduction of photographic illustrative material is not always entirely satisfactory.

Participants: Brent (Philadelphia, Pa.), Fraser (Montreal), Johnson (Gainesville, Fla.), Kalter (Cincinnati, Ohio), Karnofsky (New York, N.Y.), Klein (Milwaukee, Wisc.), Murphy (New York, N.Y.), Runner (Boulder, Colo.), Trasler (Montreal), Warkany (Cincinnati, Ohio), Wilson (Gainesville, Fla.).

34. NEW METHODS IN EMBRYOLOGY

Detection of molecules through immunochemical methods
1965

Editor: Et. Wolff — Hermann
Actualités Scientifiques et Industrielles 1321 — Paris
231 pp., 85 figs., 18 tbs.
(paper-bound)

This book is the outcome of a series of seminars organized in 1964 by Prof. Et. Wolff at the Collège de France, Paris. Speakers in these seminars were four well-known European specialists in chemical embryology (Ranzi, ten Cate †, van Doorenmaalen, Croisille), and a well-known immunochemist, originator of the immuno-electrophoretic technique (Grabar, of the Institut Pasteur).

The book contains an introduction by Et. Wolff, a general paper by Grabar on immunochemical studies of cell and tissue constituents, and five extensive papers on more specific subjects, ranging in size from 24 to 74 pages. The papers by ten Cate and by van Doorenmaalen are in English, while all the other contributions are in French.

The titles of the five special papers are as follows: "Problèmes d'immunochimie et de la différenciation protéique dans le développement des oursins, des batraciens et d'autres animaux" (Ranzi); "Considerations on the problem of differentiation and a review of immunochemical studies on the embryonic brain and ocular lens" (ten Cate); "Immunohistological studies of proteins during the development of chick lens" (van Doorenmaalen); "Synthèse et distribution des protéïnes contractiles, myosine et actine, pendant le développement des muscles cardiaque et squelettique chez l'embryon de poulet" (Croisille); "Etude, par les méthodes immunochimiques, de l'apparition de quelques constituants caractéristiques du foie et du rein adultes pendant le développement embryonnaire du poulet" (Croisille).

The book is printed in photo-offset; the photographical illustrations are well-printed on glossy paper. The book has no index.

The main title of the book suggests that it is the first of a series of similar books. However, this is not explicitly stated, and if it should not be so, the choice of the main title is unfortunate, because it suggests a much wider scope than is actually offered.

35. RETENTION OF FUNCTIONAL DIFFERENTIATION IN CULTURED CELLS

1964

Editor: V. Defendi
The Wistar Institute Symp. Monographs, nr. 1
127 pp., 32 figs., 6 pls., 15 tbs.
(paper-bound)

The Wistar Institute Press
Philadelphia
Price: $ 5.—

This is a report of a symposium held at the Wistar Institute, Philadelphia, March 1964. It was the first of a series of one-day symposia to be held at the Wistar Institute each year in early spring, and to be published in the same year. Each symposium will deal with a relatively well-defined field of investigation which is still in an initial phase, but rapidly expanding.

The present symposium had 45 participants, all but one from the U.S.A. Ten papers were read, ranging in length from 6 - 18 pages. The first paper, "Continued inductive tissue interaction during differentiation of mouse embryonic rudiments in vitro", by Auerbach deals with organ culture rather than cell culture. All other papers are concerned with cultured vertebrate (mostly mammalian) cells. All papers report on original research, mostly with stress on biochemistry and immunology. Papers of specific interest to developmental biologists are those by Cooper and Lash ("Embryonic cell cultures and inherent obsolescence") and by Davidson ("Gene activity in differentiated cells").

All papers are followed by discussions. The book is well-illustrated. It has an author index and a brief subject index.

The subject index is based on titles of papers only, and hence its usefulness is almost nil.

Participants: Ambrose (Boston, Mass.), Auerbach (Madison, Wis.), Bearn (New York, N.Y.), Bennett (Rye, N.Y.), Billingham (Philadelphia, Pa.), Boyse (Rye, N.Y.), Buonassisi (Waltham, Mass.), Coon (Waltham, Mass.), Cooper (Philadelphia, Pa.), Davidson (New York, N.Y.), Dawe (Bethesda, Md.), Defendi (Philadelphia, Pa.), De Mars (Madison, Wis.), Eagle (New York, N.Y.), Earle (Bethesda, Md.), Ephrussi (Cleveland, Ohio), Flexner (Philadelphia, Pa.), Gartler (Seattle, Wash.), Gey (Baltimore, Md.), Goldstein (Memphis, Tenn.), Grant (Washington, D.C.), Green (New York, N.Y.), Hayflick (Philadelphia, Pa.), Holtzer (Philadelphia, Pa.), Hungerford (Fox Chase, Pa.), Konigsberg (Baltimore, Md.), Koprowska (Philadelphia, Pa.), Koprowski (Philadelphia, Pa.), Krooth (Ann Arbor, Mich.), Lash (Philadelphia, Pa.), Love (Philadelphia, Pa.), Markert (Baltimore, Md.), Moorhead (Philadelphia, Pa.), Myers (Pittsburg, Pa.), Nowell (Philadelphia. Pa.), Old (Rye, N.Y.), Palm (Philadelphia, Pa.), Petrakis (San Francisco, Cal.), Sato (Waltham, Mass.), Schultz (Fox Chase, Pa.), Silvers (Philadelphia, Pa.), Steinberg (Baltimore, Md.), Stevenson (Bethesda, Md.), Svoboda (Praque), Wecker (Philadelphia, Pa.).

36. CELLULAR CONTROL MECHANIMS AND CANCER

1964

Editors: P. Emmelot and O. Mühlbock
398 pp., 89 figs., 45 tbs.

Elsevier Publishing Company
Amsterdam-London-New York
Price: 110 s.

This book contains the proceedings of a conference held in Amsterdam in September 1963 on the occasion of the fiftieth anniversary of the Netherlands Cancer Institute. Leading scientists in the fields of normal cell biology and cancer were invited to present general reviews, latest results and discussions around the problem of cellular control mechanisms and their bearing on the cancer problem.

The conference was divided into seven half-day sessions: one on genetic control of protein synthesis (5 papers), one on mechanisms of cellular differentiation (3 papers), one on growth regulation (5 papers), two on structure and function of tumour cells (10 papers), and two on carcinogenic agents (12 papers). Each group of papers is followed by a group discussion.

All papers are followed by a list of references. The book is well printed and illustrated and provided with an extensive subject index.

Contributors: Antoni (Budapest), Arky (Budapest), Baldwin (Nottingham), Barker (Nottingham), Barski (Villejuif), Beale (Edinburgh), Berenblum (Rehovoth), Boer (Villejuif), Börner (Tübingen), Boyland (London), Braun (Madison, Wisc.), Bryan (Bethesda, Md.), Bullough (London), Chieco-Bianchi (Bari), Claude (Brussels), Dalton (Bethesda, Md.), Daniel (Madison, Wisc.), De Benedictis (Bari), Della Porta (Milano), De Maeyer (Louvain), De Maeyer-Guignard (Louvain), Emmelot (Amsterdam), Feldman (Rehovoth), Fiore-Donati (Bari), Foulds (London), Friedrich-Freksa (Tübingen), Globerson (Rehovoth), Gros (Paris), Gullino (Bethesda, Md.), Harel, J. (Villejuif), Harel, L. (Villejuif), Hidvégi (Budapest), Howatson (Toronto), Imbenotte (Villjuif), Jacob (Paris), Kaplan (Palo Alto, Calif.), Klein (Stockholm), Koller (London), Lacour (Villejuif), Lanka (Tübingen), Latarjet (Paris), Lyons (New York, N.Y.), Magee (Carshalton), Mittermayer (Madison, Wisc.), Moore (New York, N.Y.), Partridge (Nottingham), Potter (Madison, Wisc.), Ríman (Prague), Rosenberg (New York, N.Y.), Rusch (Madison, Wisc.), Sachensenmaier (Madison, Wisc.), Seifert (Prague), Sörm (Prague), Süss (Tübingen), Thorell (Stockholm), Umbarger (Cold Spring Harbor, N.Y.), Várterész (Budapest), Weisburger (Bethesda, Md.), Williams-Ashman (Chicago, Ill.), Yaffe (Rehovoth).

37. THE THYMUS IN IMMUNOBIOLOGY

Structure, function, and role in disease

1964

Editors: R. A. Good and A. E. Gabrielsen
778 pp., 351 figs., 90 tbs.

Harper & Row
New York - Evanston - London
Price: 150 s.

The reason why this book is announced here is that it has become evident in recent years that the thymus plays an important role in the developmental biology of the later stages of ontogenesis. The thymus, its analogue, the bursa of Fabricius in birds, and probably other gut-associated lymphoid tissues as well, contribute in a major way to the maturation and immunological capacity of the rest of the lymphoid tissue.

The book contains the proceedings of a conference held late in 1962 at the University of Minnesota. It had close to one hundred participants, 19 of which came from countries other than the U.S.A. and Canada. The book consists of 36 papers with discussions, a general discussion, and a general summary. The papers are grouped into five sections, entitled: I. Introduction (2 papers); II. Anatomy and chemistry of the thymus (4 papers); III. The thymus and bursa of Fabricius: Lymphocytopoiesis (12 papers); IV. The thymus and bursa of Fabricius: the immune response (13 papers); V. The thymus in experimental and clinical disease (5 papers).

It is impossible to list all papers that are of possible interest to our readers. Only a few will be specifically mentioned. The first is that by Talmage and Claman: "Cell potential: its mutation and selection. A theory of differentiation based on antibody production". In this paper a general model of cell differentiation is presented which is based on the concepts of specific protein synthesis and "asymmetric" cell division. Although the model is intended to apply to all differentiative processes, it is discussed chiefly in relation to the thymus.

The other papers to be mentioned specifically are those by Auerbach: "Experimental analysis of mouse thymus and spleen morphogenesis" and by Papermaster, Condie, Finstad, and Good: "Significance of the thymus in the evolution of the lymphoid tissue and acquired immunity".

The book is well illustrated, mainly with photographs. It is concluded by a combined author-subject index.

38. CYTOGENETICS OF CELLS IN CULTURE

1964

Editor: R. J. C. Harris
Symposia Int. Soc. Cell Biol., vol. 3
325 pp., 147 figs., 42 tbs.

Academic Press
New York — London
Price: $ 13.—

In this international symposium emphasis was laid on 1) new techniques to detect patterns of DNA replication, to better understand cellular control mechanisms, and to perform chromosome analyses with automated instrumentation; 2) the effect of cell hybridization and of noxious substances such as radiation, chemical agents, and viruses on chromosomal patterns, and 3) the influence of altered chromosomal complement on the survival of cells in long-term culture or after ionizing radiation treatment.

Although some of the topics will be of peripheral interest to many embryologists, the implications of the papers of, for example, Barski and of Ephrussi *et al.* on the hybridization of somatic cells in vitro, that of Frederic and Corin-Frederic on chromosomal alterations of cells cultivated in the presence of heterologous tissue extracts, that of J. H. Taylor on the regulation of DNA replication and variegation-type position effects, and that of German on identification and characterization of human chromosomes by DNA replication sequence, may interest those concerned with the mechanisms of cellular control.

Contributors: Barski (Villejuif), Cho (Boston, Mass.), Cohn (Madison, Wisc.), Corin-Frederic (Liège), Ephrussi (Cleveland, Ohio), Ford (Harwell), Fraccaro (Pavia), Frederic (Liège), German (New York, N.Y.), Hayflick (Philadelphia, Penn.), Ho (Boston, Mass.), Jacobs (Edinburgh), Kihlman (Uppsala), Levan (Lund), Lima-de-Faria (Lund), Lindsten (Stockholm), Makino (Sapporo), Moorhead (Philadelphia, Penn.), Nakanishi (Chiba), Nichols

(Camden, N.J.), Oishi (Pasadena, Calif.), Pomerat (Pasadena, Calif.), Puck (Denver, Colo.), Ragni (Madison, Wisc.), Reitalu (Lund), Ruddle (New Haven, Conn.), Scaletta (Cleveland, Ohio), Stenchever (Cleveland, Ohio), Stubblefield (Houston, Texas), Szybalski (Madison, Wisc.), Taylor (New York, N.Y.), Yerganian (Boston, Mass.), Yoshida (Cleveland, Ohio).

39. REGENERATION IN ANIMALS AND RELATED PROBLEMS 1965

Editors: V. Kiortsis and H. A. L. Trampusch
592 pp., 158 figs., 30 pls., 20 tbs.

North-Holland Publishing Cy.
Amsterdam
Price: 120 s.

This book contains the proceedings of a fortnightly Symposium held at Lagonissi, near Athens, in April 1964. It was apparently the first truly international Symposium on regeneration to be organized in Europe. Prof. Kiortsis of the University of Athens (formerly Geneva) took the initiative, and the Symposium was sponsored by NATO's Division of Scientific Affairs, with additional financial support of the National Science Foundation (U.S.A.). The book is dedicated to the memory of the late Prof. Emile Guyénot of the University of Geneva.

The Symposium had 46 participants, 40 of whom came from nine European countries. The remaining six came from the U.S.A. Eastern European countries were not represented.

The subject coverage of the book in terms of taxonomy is very broad. All major metazoan phyla are represented. The nature of the 44 contributions is rather varied. About half are reviews and synthetic papers, while the other half are shorter contributions dealing with research on specific, limited problems. These are of course selective rather than representative for their respective fields.

The book is organized in three sections, viz "General" (5 papers), "Invertebrates" (22 papers), and "Vertebrates" (17 papers). In the second section the arrangement is by taxonomic group, whereas the third section consists of a division on regeneration proper (8 papers) and a division on "related problems" (9 papers). Among the subjects of the latter division are growth regulation, tumour growth and regulation, compensatory hyperplasia, wound healing, and neuronal and nerve regeneration. Asexual reproduction and its relation to regeneration is discussed in an extensive paper which opens the "General" section.

Most contributions are followed by discussions. A. E. Needham has written an admirable "antiphon" which places all contributions in mutual perspective.

The book is well-printed and admirably illustrated. Extensive author and subject indexes increase the book's value as a work of reference.

Participants: Abeloos (Marseille), Anton (Köln), Ballantine (Providence, R.I.), de Both (Utrecht), Burgess (London), Chandebois (Marseille), Clark (Bristol), Faber (Utrecht), Fedecka-Bruner (Nogent-sur-Marne), Foret (Princeton, N.J.), Gabriel (Orsay), Ghirardelli (Trieste), Goss (Providence, R.I.), Grasso (Bologna), Harrebomée (Amsterdam), Herlant-Meewis (Bruxelles), Issidorides (Athens), James (London), Kiortsis (Athens), Kratochwil (Wien), Lazard (Paris), Lehmann (Bern), Lender (Orsay), Moraïtou (Athens), Needham (Oxford), Palladini (Roma), Pandazis (Athens), Pohley (Köln), Seilern-Aspang (Wien), Sichel (Catania), Simpson (Cleveland, Ohio), Singer (Cleveland, Ohio), Stagni (Bologna), Stéphan (Nancy), Stéphan-Dubois (Nancy), Taban (Genève), Tardent (Zürich), Thornton (East-Lansing, Mich.), Thouveny (Marseille), Trampusch (Amsterdam), Urbani (Roma), Van Damme (Bruxelles), Vannini (Bologna), Verwoerd (Amsterdam), Zafiratos (Athens), Ziller-Sengel (Nogent-sur-Marne).

40. MEDIKAMENTÖSE PATHOGENESE FETALER MISSBILDUNGEN

1964

Editors: Th. Koller and H. Erb
156 pp., 90 figs., 24 tbs.
(paper-bound)

S. Karger
Basel — New York
Price: DM 25.—

This Symposium was organized at the instigation of two pharmaceutical firms, and held at Liestal, Switzerland, in March 1963. It had 27 participants coming from Switserland and Germany. Among them were clinicians, pharmacologists, biologists, and chemists.

The report contains 13 papers and two group discussions. Both papers and discussions are partly in German and partly in French. Six papers are mainly experimental, and five strictly clinical in nature. One paper deals with the responsibility of the pharmaceutical industry, and one with the legal aspects of the problem under discussion.

The book is adequately illustrated and concluded by an alphabetical index.

See also review no. 46 below.

Contributors: Gander (Lausanne), Kaufmann (Basel), Klein (Genève), Kurz (Bern), Loustalot (Basel), Massenbach (Lübeck), Metzger (Genève), Mildenstein (Lübeck), Neuweiler (Bern), Richter (Bern), Rickenbacher (Zürich), Da Rugna (Basel), Schultz (Altona), Sierts-Roth (Altona), Taillard (Basel), Töndury (Zürich).

41. THE CELL IN MITOSIS

1963

Editor: L. Levine
274 pp., 100 figs., 9 tbs.

Academic Press
New York — London
Price: $ 10.—

This symposium report was not available earlier, but is considered sufficiently important to be briefly reviewed in this issue.

The symposium was held in November 1961. Of the ten contributors nine came from the U.S.A. and one from Canada. The book should be of great interest to all those working on the mechanisms of cleavage in animal eggs. In fact much of the material included refers to animal eggs. The techniques used in the original work reported are mainly biochemistry and electron microscopy.

One out of the ten papers must be specifically mentioned, because it transcends the specific topic of the symposium and is of general interest to developmental biologists. This is the paper by D. P. Bloch on histones, which includes important sections on the possible role of nuclear histones in gene function, and hence in cellular differentiation and somatic inheritance.

All papers are followed by sometimes extensive discussions. The book, which is well illustrated, is concluded by author and subject indexes.

Contributors: Bloch (Austin, Texas), Buck (London, Canada), Cleveland (Athens, Ga.), Elliott (Ann Arbor, Mich.), Levine (Detroit, Mich.), Rebhun (Woods Hole, Mass.), Scherbaum (Los Angeles, Cal.), Szent-Györgyi (Woods Hole, Mass.), Wilson (East Lansing, Mich.), Zimmerman (Brooklyn, N.Y.).

42. THE ROLE OF CHROMOSOMES IN DEVELOPMENT
1964

Editor: M. Locke
23rd Symposium of the Society for
the study of Development and Growth
302 pp., 78 figs., 26 tbs.

Academic Press
New York — London

The 23rd Growth Symposium was held in Amherst, Mass. in June 1964. All participants except two came from the U.S.A.

Most of the contributions are concerned with chromosome structure and biochemistry, and with the regulation of gene function in a variety of organisms. The relevance of these topics for development and differentiation is obvious, and is once more stressed by Markert in his summary of the symposium which opens the book. However, the book as a whole is perhaps of more immediate interest to geneticists and molecular biologists than to embryologists in the strict sense. Therefore, only two contributions will be specifically mentioned, viz. that on genetic and functional mosaicism is the mouse (Russell), and that on genetic control and regulation of developmental pathways (Lewis). The latter paper is more specifically concerned with the fascinating bithorax pseudoallelic series of mutants in Drosophila.

The discussions held at the symposium are not recorded. The book is adequately illustrated and has author and subject indexes.

Contributors: Brink (Madison, Wisc.), Busch (Houston, Texas), Coleman (Durham, N.C.), Edström (Gothenburg), Hsu (Houston, Texas), Lewis (Pasadena, Calif.), Markert (Baltimore, Md.), Moses (Durham, N.C.), Nanney (Urbana, Ill.), Nash (Madison, Wisc.), Plaut (Madison, Wisc.), Reich (New York, N.Y.), Ro (Houston, Texas), Russell (Oak Ridge, Tenn.), Schmid (Houston, Texas), Singh (Houston, Texas), Starbuck (Houston, Texas), Stubblefield (Houston, Texas).

43. MECHANISMS OF CELLULAR DIFFERENTATION AND INDUCTION
1963

Editors: G. V. Lopashov, A. A. Nejfakh
and O. G. Stroeva
272 pp., 69 figs., 18 tbs.

Izdatelstwo Nauka
Moscow — Leningrad

This book, written in Russian, constitutes the report of a Symposium held in Moscow in November 1963, and dealing with a variety of subjects in experimental and molecular embryology.

Since much very recent Russian literature is discussed in the various contributions, it is expected that several non-Russian workers may wish to read one or more contributions or to have them translated for their personal use. Therefore, the entire table of contents is printed below.

Most papers range in size between 10 and 20 pages, including the brief discussions which follow most of the papers. Each paper has its own bibliography. The book is illustrated mostly with graphs and photomicrographs.

Contents: Khesin: "Factors determining the synthesis of specific messenger RNA"; Spirin, Belitsina and Ajtkhozhin: "Messenger RNA in early embryogenesis"; Nejfakh: "Use of inhibition of nuclear exchange for research on the morphogenetic function of the nucleus in development"; Kafiani and Timofeeva: "Dynamics of the synthesis of nuclear RNA in early embryogenesis."; Kiknadze: "Analysis of works on moving puffs in larval development of Diptera against a background of experimental influences"; Studitskij: "Some questions concerning the theory of tissue regulation"; Popov and Borsuk: "Relation between the specific function of the retina and its inductive influences"; Fridenstein: "The induction process in the adult organism evoked by transitional epithelium"; Vyazov, Averkina and Petrosyan: "Distribution of lens antigen in tissues of early chick embryos and induction problems"; Detlaf: "Duration of interkinetic cell stage, cell division and differentiation"; Kostomarova: "Differentiation of loach blastoderms isolated from the yolk in different culture media"; Putchkov: "Development of the morphogenetic apparatus of the sclera in the eye of the chick embryo"; Ignatieva: "On the comparative morphological approach in the analysis of inductive interactions"; Tumanishvili: "Role of intercellular interactions in regulation of tissue development"; Vasiliev, Gelfand, Gelstein and Malenkov: "Cell complexes in hematomas of mice and rats"; Zhinkin: "Synthesis of DNA and cell population in embryonic development"; Lopashov: "Embryology and cybernetics".

44. THE EPIDERMIS

1964

Editors: W. Montagna and W. C. Lobitz
669 pp., 314 figs., 43 tbs.

Academic Press
New York — London
Price: $ 15.00

The aim of the first symposium on dermatologic research was to explore in detail the fundamental aspects of the epidermis and the process of keratinization. The contributors discussed mainly their own, or collaborative, recent work in this field.

Particularly valuable for those interested in developmental aspects are the contributions of Sengel on the determinism of the differentiation of the skin and cutaneous appendages of the chick embryo, of Bell *et al.* on feather formation and synthesis of keratin by primary skin cells and by skin cells grown in vitro, of Fell on the experimental study of keratinization in organ culture, of Moscona on the stability of phenotypic traits in embryonic integumental tissues and cells, of Hay on the secretion of a connective tissue protein by developing epidermis, and of Mercer on protein synthesis and epidermal differentiation.

Further fine-structural aspects of keratinization are considered in six other papers; two papers deal with histochemical topics and nine with biochemical aspects. There are also contributions on biological and on pathological aspects.

The book is well-printed and profusely illustrated. It is concluded by author and subject indexes.

Contributors: Bagatell (Cleveland, Ohio), Bell (Cambridge, Mass.), Bernstein (Ann Arbor, Mich.), Brody (Los Angeles, Calif.), Caulfield (Boston, Mass.), Clark (Boston, Mass.), Crounse (Miami, Fla.), Cummins (New Orleans, La.), Ellis (Providence, R.I.), Esoda (Philadelphia, Pa.), Evans (Seattle, Wash.), Fell (Cambridge), Flesch (Philadelphia, Pa.), Freinkel (Boston, Mass.), Greulich (Los Angeles, Calif.), Hay (Boston, Mass.), Hershey (St. Louis, Mo.), Kandutsch (Bar Harbor, Maine), Kligman (Philadelphia. Pa.), Madgic (Boston, Mass.), Malkinson (Chicago, Ill.), Malt (Cambridge, Mass.), Mercer (Canberra), Merrill (Cambridge, Mass.), Moscona (Chicago, Ill.), Mottet (Seattle, Wash.), Nicolaides (Portland, Ore.), Odland (Seattle, Wash.), Pearson (Chicago, Ill.), Rashad (Seattle, Wash.), Rogers (Melbourne, Austr.), Roth (Boston, Mass.), Rothberg (Bethesda, Md.), Rothman (Chicago, Ill.), Schuler (Cambridge, Mass.), Sengel (Paris), Stewart (Cambridge, Mass.), Stoughton (Cleveland, Ohio), Swanbeck (Stockholm), Van Scott (Bethesda, Md.), Weber (Mainz), Wilgram (Boston, Mass.).

45. GROWTH AND MATURATION OF THE BRAIN
1964

Editors: D. P. Purpura and J. P. Schadé
Progress in Brain Research, vol. 4
289 pp., 180 figs., 46 tbs.

Elsevier Publishing Cy.
Amsterdam - London - New York
Price: 80 s.

THE DEVELOPING BRAIN
1964

Editors: W. A. Himwich
and H. E. Himwich
Progress in Brain Research, vol. 9
267 pp., 127 figs., 35 tbs.

Elsevier Publishing Cy.
Amsterdam - London - New York
Price: 80 s.

These two Symposium reports are best reviewed together, since they deal with the same field, and differ only in contributors and in the relative stress put on various topics. The first symposium was held in Amsterdam in September 1962, and the second in Galesburg, Ill. in April 1963. The first meeting had 21 contributors, 10 of which came from the U.S.A. The second meeting had 48 contributors, 9 of which came from countries other than the U.S.A. In both meetings together 8 contributors came from Eastern-European centres (Moscow, Prague, Poznán). Only two contributors took part in both meetings. The first report contains 12 papers, the second 25 papers, many of which are only a few pages long.

The papers of the first report deal mainly with the brain of the human and some other mammals. Only two papers deal with biochemistry, most of the others with structure and function and their relationships. In the second report more stress is laid on electrophysiology, biochemistry, and neuropharmacology, and the papers deal with a variety of mammals, and also with other vertebrate classes.

Both reports include the discussions following the papers, and both are concluded by author and subject indexes. The production of the books is excellent.

Contributors to vol. 4: Bonavita (Palermo), Brizzee (Omaha, Nebr.), Colon (Amsterdam), Hierowski (Poznán), Housepian (New York, N.Y.), Humprey (Pittsburgh, Pa.), Kharetchko (Salt Lake City, Utah), Levi-Montalcini (St. Louis, Mo.), Løvtrup (Göteborg), Marty (Paris), Noback (New York, N.Y.), Pappas (New York, N.Y.), Purpura (New York, N.Y.), Rabinowicz (Lausanne), Sarkisov (Moscow), Schadé (Amsterdam), Scherrer (Paris), Shofer (New York, N.Y.), Van Backer (Amsterdam), Vogt (Lincoln, Nebr.), Wender (Poznán).

Contributors to vol. 9: Akert (Madison, Wisc.), Anokhin (Moscow), Aprison (Indianapolis, Ind.), Barron (Hines, Ill.), Berl (New York, N.Y.), Bernsohn (Hines, Ill.), Bogdanski (Bethesda, Md.), Brodie (Bethesda, Md.), Buno (Galesburg, Ill.), Cohen (Minneapolis, Minn.), DiPerri (Galesburg, Ill.), Dravid (Galesburg, Ill.), Ellingson (Omaha, Nebr.), Fisher (Prague), Flock (Rochester, Minn.), Fourment (Paris), Guroff (Bethesda, Md.), Hable (Madison, Wisc.), Hess (Chicago, Ill.), H. E.. Himwich (Galesburg, Ill.), W. A. Himwich (Galesburg, Ill.), Horwitt (Elgin, Ill.), Inman (Galesburg Ill.),, Jilek (Prague), Kabara (Detroit, Mich.), Kobayashi (Galesburg, Ill.), Krulich (Prague), La Velle (Chicago, Ill.), Lindsley (Los Angeles, Calif.), Mc Caman (Indianapolis, Ind.), Milstein (Minneapolis, Minn.), Owen (Rochester, Minn.), Pascoe (Amsterdam), Petersen (Galesburg, Ill.), Pscheidt (Galesburg, Ill.), Schadé (Amsterdam), A. Scheibel (Los Angeles, Calif.), M. Scheibel (Los Angeles, Calif.), Scherrer (Paris), Swaiman (Minneapolis, Minn.), Trojan (Prague), Tyce (Rochester, Minn.), Udenfried (Bethesda, Md.), Vernadakis (Salt Lake City, Utah), Waisman (Madison, Wisc.), Wang (Madison, Wisc.), Withrow (Salt Lake City, Utah), Woodbury (Salt Lake City, Utah).

46.

TERATOGENESIS

1964

Symposion der Schweizerischen
Akademie der Medizinischen
Wissenschaften
621 pp., 119 figs., 24 tbs.

Schwabe & Co.
Basel
Price: S.Fr. 30.—

This Symposium was held in Basel in October 1963 under the responsibility of the Swiss Academy of Medical Science. The report constitutes a special issue of the Bulletin of the above Academy, but is available separately.

The Symposium had 46 participants, half of them coming from European countries other than Switzerland. Five of the Swiss participants had also attended the Symposium held in Liestal earlier in the same year (see review no. 40 above), but only one of these delivered a paper on both occasions. Consequently there is hardly any overlap between the two symposium reports as regards authors.

The report contains 16 papers concerned almost exclusively with mammalian and human teratogenesis. Eight papers are in German, six in French, and two in English. All papers have summaries in German, French, English, and Italian. About half of the papers are experimental, the other half clinical in nature. Some of the papers are followed by discussions. The book is concluded by a verbatim report of a round table discussion, which occupies 22 pages of small print.

The book is adequately illustrated, mostly with photographs. There is a list of participants, but no alphabetical index.

Contributors: Baerlocher (Basel), Buchs (Basel), Büchner (Freiburg/Br.), Constam (Zürich), Courrier (Paris), Degenhardt (Frankfurt/Main), Edwards (Birmingham), Ford (Harwell), Gigon (Basel), Giroud (Paris), Goerttler (Heidelberg), Hottinger (Basel), Jacottet (Lausanne), Jost (Paris), Just (Basel), Justin-Besançon (Paris), Källén (Malmö), Knörr (Tübingen), Koller (Basel), Krone (Bamberg), Kullander (Malmö), Lefebvre (Paris), Löffler (Basel), Löffler (Zürich), Loosli (Füllinsdorf), Lorenz (Köln-Mülheim), Martin (Genève), Mayer (Homburg/Saar), Mercier-Parot (Paris), Millen (Cambridge), von Nemes-Balogh (Budapest), Péquignot (Paris), Reichstein (Basel), Richter (Bern), Rickenbacher (Zürich), Rossi (Bern), Roux (Paris), Svartz (Stockholm), Theiss (Basel), Töndury (Zürich), Tuchmann-Duplessis (Paris), de Watteville (Genève), Wenner (Liestal), Werthemann (Basel), Wiedemann (Kiel), Wolf-Heidegger (Basel).

47.

NEW PERSPECTIVES IN BIOLOGY

1964

285 pp., 132 figs., 41 tbs.
Editor: M. Sela

Elsevier Publishing Cy.
Amsterdam - London - New York
Price: 80 s.

This book is a report of a Symposium held in June 1963 in Rehovoth, Israel, on the occasion of the inauguration of the Ullman Institute of Life Sciences. This Institute comprises research units in various fields of subcellular and molecular biology, and the Symposium papers are likewise united by their emphasis on molecular biology. Of the 28 contributors to the Symposium 13 came from the U.S.A., 7 from Israel, and 8 from various European countries.

The 21 papers are arranged in six groups as follows: 1) New perspectives in protein research (6 papers); 2) Structure and function of nucleic acids (4 papers); 3) Organization and function of enzyme systems and subcellular units (4 papers); 4) New antibiotics (1 paper); 5) Chemical approaches to immunology (2 papers); 6) Cellular, subcellular and molecular aspects of differentiation (4 papers).

It is particularly the last group of papers which is of interest to developmental biologists. The following papers are included: "Morphogenesis of phage and its genetic determinants" (by E. Kellenberger); The analysis of regulatory mechanisms in cell differentiation (by L. Sachs); "Genetic aspects of neoplasia" (by G. Klein); and "Cell differentiation and the immune mechanism" (by M. Feldman *et al.*). The paper by Sachs discusses the in vitro differentiation and function of lymphocytes, cell interactions involved in growth control *in vitro* (using antigenetic cell markers), and the problem of irreversible differentiation (ribosome programming, DNA-RNA hybridization and somatic cell hybridization). The paper by Feldman *et al.* is concerned with the differentiation *in vivo* of immunologically competent cells, and with the *in vitro* differentiation of muscle cells and its relationship to RNA synthesis.

The book is well-printed and adequately illustrated. It is concluded by a subject index. An author index and a list of contributors are lacking.

Contributors: Anfinsen (Bethesda, Md.), Bennett (New York, N.Y.), Chain (Rome), Chargaff (New York,N.Y.), Conway (New York, N.Y.), Edsall (Cambridge, Mass.), Elson (Rehovoth), Feldman (Rehovoth), Gierer (Tübingen), Globerson (Rehovoth), Goldstein (New York, N.Y.), Heidelberger (New Brunswick, N.J.), Katchalski (Rehovoth), Kellenberger (Geneva), Kendrew (Cambridge), Klein (Stockholm), Lipmann (New York, N.Y.), Lynen (München), Nachmansohn (New York, N.Y.), Nakamoto (New York, N.Y.), Neurath (Seattle, Wash.), Ochoa (New York, N.Y.), Sachs (Rehovoth), Sela (Rehovoth), Spyrides (New York, N.Y.), Theorell (Stockholm), Weber (Heidelberg), Yaffe (Rehovoth).

48. MECHANISMS OF NEURAL REGENERATION
1964

Editors: M. Singer and J. P. Schadé
Progress in Brain Research, vol. 13
241 pp., 116 figs., 11 tbs.

Elsevier Publishing Cy.
Amsterdam - London - New York
Price: 80 s.

This report contains a series of eight lectures delivered during a "workshop" which was held as part of the first International Summer School of Brain Research in Amsterdam, July 1963. Of the nine contributors four came from the U.S.A. and five from European countries.

Some of the lectures are rather specialized, but others are of more general significance for developmental biologists. This holds particularly for the following articles: 1. "Neurotrophic relations in the regeneration process", by E. Gutmann (41 pages), which includes a discussion of changes of neurotrophic relations during morphogenesis; 2. "Development, degeneration and regeneration of receptor organs", by J. Zelená (37 pages), which deals with taste organs, lateral line organs, cutaneous and muscle receptors; 3. "Nerves as morphogenetic mediators in regeneration", by H. A. L. Trampusch (14 pages), which reports on experiments in axolotl limb regeneration.

To workers themselves active in the fields of regeneration or neuro-embryology most of the other articles will also prove valuable. They discuss such subjects as axoplasmic streaming and phospholipid transport, the influence of the nerve growth factor on neural regeneration, and electron microscopy of myelin regeneration.

Several articles, among them those by Gutmann and Zelená, have very extensive bibliographies. The book includes the discussions following some of the lectures, and is concluded by author and subject indexes. Its production is excellent, as in the other volumes of this series.

Contributors: Gutmann (Prague), Liu (Philadelphia, Pa.), Lubińska (Warsaw), Miani (Padua), Scott (Philadelphia, Pa.), Singer (Cleveland, Ohio), Trampusch (Amsterdam), Webster (Boston, Mass.), Zelená (Prague).

49. MERISTEMS AND DIFFERENTIATION

1964

Brookhaven National Laboratory	Brookhaven National Laboratory
Brookhaven Symposia in Biology, vol. 16	Upton, New York
240 pp., 159 figs., 18 tbs.	Price: $ 2.50
(paper-bound)	

Plant morphologists, physiologists, and geneticists discuss in this volume recent developments in the field of meristems and differentiation. Nearly all contributors are from the United States.

The first part of the book is based on experimental investigations concerning the meristem and the physiology of cell division and differentiation. In the second part the authors deal more specifically with morphogenesis and differentiation. Development in a variety of higher plants is described. Also metabolic changes in *Euglena* and the effect of the cytoplasm on cell wall structure in *Nitella* and *Hydrodictyon* are discussed. One paper is devoted to the plant embryo, while other articles deal with the embryo-like cells of meristems. Recent advances with plant tissue cultures are enumerated.

This sixteenth symposium, which was held in 1963, is a valuable addition to the list of Brookhaven symposia; not only botanists but also zoologists may profit from it.

Each paper is followed by a list of references. A subject index is included.

Contributors: Ball (Raleigh, N.C.), Barker (New Brunswick), Berlyn (New Haven, Conn.), Blakely (Ithaca, N.Y.), Bonnett (Cambridge, Mass.), Bowen (Ames, Iowa), Braun (New York, N.Y.), Brown (Edinburgh), Caplin (Los Angeles, Calif.), Clowes (Oxford), Constantin (Oak Ridge, Tenn.), Crotty (New York, N.Y.), Cuany (Iowa City, Iowa), D'Amato (Pisa), Dennis (Geneva, N.Y.), Erickson (Philadelphia, Pa.), Evans (Brookhaven, N.Y.), Forman (Berkeley, Calif.), Galston (New Haven, Conn.), Gibor (New York, N.Y.), Gifford (Davis, Calif.), Granick (New York, N.Y.), Green (Philadelphia, Pa.), Gunckel (New Brunswick, N.J.), Hague (Eugene, Ore.), Halperin (Storrs, Conn.), Heslop-Harrison (Birmingham), Hotta (Urbana, Ill.), Jensen (Berkeley, Calif.), Kaplan (Berkeley, Calif.), Kefford (New Haven, Conn.), Keitt (Tallahassee, Fla.), Kent (Ithaca, N.Y.), Leopold (Lafayette, Ind.), Lyman (Brookhaven, N.Y.), Maksymowych (Villanova, Pa.), Mapes (Ithaca, N.Y.), Mericle (East Lansing, Mich.), Morel (Versailles), Paolillo (Urbana, Ill.), Popham (Columbus, Ohio), Quastler (Brookhaven, N.Y.), Setterfield (Ontario), Shapiro (Eugene, Ore.), Skoog (Madison, Wisc.), Smillie (Brookhaven, N.Y.), Soma (Tokyo), Sparrow (Brookhaven, N.Y.), Stallard (Austin, Texas), Stein (Missoula, Mont.), Stern (Urbana, Ill.), Steward (Ithaca, N.Y.), Sussex (New Haven, Conn.), Takats (Philadelphia, Pa.), Tepper (Syracuse, N.Y.), Tulecke (Yonkers, N.Y.), Van 't Hof (Brookhaven, N.Y.), Whaley (Austin, Texas), Zubay (Brookhaven, N.Y.).

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